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ABSTRACT

The year-round school operation of the Valley View School District is described from its planning stages through the implementation of the plans. A "45-15 Plan" provides for each pupil forty-five days of instruction and fifteen equivalent days of vacation. With the cycle repeated four times each year, one-fourth of the pupils are on vacation at any one time. The experience has shown that there are three main problems to be solved in undertaking such a plan. These are: student scheduling, teacher scheduling, and winning community support. The most difficult of these is student scheduling, but this problem can be eased considerably by the use of individualized instruction and by having as large an enrollment as possible in each school. Attached are appendices including instruments used in the study and questionnaires used among concerned participants. (DAS)

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FINAL REPORT

Project No. 0-0011
Grant No. OEG-0-70-2642 (508)

PLANNING A YEAR-ROUND SCHOOL OPERATION

(A Case-Study of the Valley View School District 45-15 Plan)

William M. Rogge
Valley View School District
590 Belmont Avenue
Romeoville
Lockport, Illinois
60441

January, 1971

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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PREFACE

This report is possible only because the whole community of Valley View School District was willing to be involved and to be observed while undertaking a significant innovation in American education.

Special acknowledgements must be given to the Valley View School Board and all of the administrators and teachers who were willing to put up with hours of questioning and other inconveniences of data collecting.

The project itself was the result of the constant inquiry of James Gove. He saw the larger impact of the Valley View 45-15 Plan on American education. His constant attention gave assurance that the project would be completed so that both the needs of the district and the interests of outside persons and groups would be satisfied.

The citizens of Valley View can be proud of their school district.

William M. Rogge
January, 1971
Urbana, Illinois

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SUMMARY

This report covers the planning and collection of baseline data for the beginning of a year-round school operation. The operation started on June 30, 1970, at Valley View School District, Lockport, Illinois. The district covers over forty square miles of primarily rural area in Will County, about one-half hour drive from the center of Chicago.

The district created the "45-15 Plan" which provides about 6,000 pupils, grades kindergarten through eight, forty-five days of instruction and fifteen equivalent school days of vacation. The cycle repeats four times each year. However, only one-fourth of the pupils are on vacation at any one time.

Baseline data included student achievement, teacher opinions, student descriptions of their classrooms, community opinions, and costs of operation. The data showed that the community entered the 45-15 Plan with a strong feeling of support, though a few families were strongly against it. Also, these families were critical of almost all features of the school district. A few teachers were strongly against the Plan, but many of them indicated that they did not intend to remain in the district.

The initial cost analysis showed that savings might be as high as five percent, primarily due to reduced debt retirement payments per pupil. Whatever the amount of the savings, it will be almost immediately realized because the one-third space increase generated by the 45-15 Plan will be used up in about a year and a half or less. The population movement from the Chicago Metropolitan area will overrun the district in ten to twenty years. The enrollment may increase from 6,000 to 20,000 pupils by 1980.

Unlike earlier adoptions of year-round operations, this one can be researched in great depth because of the large quantity of data already collected on various features of the Plan and the impact it may have on the community.

The Valley View experience shows that most school districts could implement a similar plan if three problems are solved well. These are student scheduling, teacher scheduling, and winning community support. Little else appeared to be a tough problem for district personnel and the school board to solve.

CHAPTER I

FERMENT FOR YEAR-ROUND SCHOOL OPERATIONS

It is already clear that Valley View School District #96, Lockport, Illinois, has undertaken a unique, year-round school operation that began on June 30, 1970. The uniqueness consists of splitting the traditional three-month summer vacation into four approximately equal segments. Each segment is about three weeks long, one for each season of the year. In this way, <u>each</u> family has the <u>same</u> vacation pattern. Actual use of such a calendar occurred on July 1, 1969, in a single school, the Becky David School of the Francis Howell Public School District in St. Charles County, Missouri.[1] Valley View School District is the first to make it a system-wide calendar. The importance of the "equal" treatment for all families seems evident when reviewing the history of many other year-round operations that have ceased. Schoenfeld and Schmitz[2] concluded in their review that one of the major deterrents has been the unfairness felt by the community when one-fourth of the families must take winter vacations as required in the staggered quarter system, the most used pattern for year-round operations by public schools until many efforts to extend the school year to 200 or more regular school days. Ralph Kimbrough,[3] in a recent conference on the extended school year, completely dismissed the staggered quarter plan with this remark, "With the multitude of year-round plans available today, the traditional four-quarter plan is one of the most unworkable plans proposed. I no longer consider it a feasible plan."

Since all earlier experiments in year-round school operations, other than voluntary attendance summer programs, have gone out of existence, it seems optimistic to hope that those beginning now, such as the program at Atlanta, Georgia, or in Nova High School, Fort Lauderdale, Florida, are assured of permanence unless left on a voluntary basis. Are there any new forces and trends that might increase the likelihood of longer survival?

At least two trends might assure longer survival for those year-round operations that use compulsory pupil attendance through the summer months, whether for the usual 180 school days per year or for an accelerated schedule that could go up to 240 days per year. The first development is the demand by legislators and taxpayers for more efficient and effective use of tax monies. The term, <u>accountability</u>, is frequently used to encompass these concerns. In these discussions, serious attention is being given to the voucher[4] system, whereby a family would be given a voucher with "x" amount of dollars per child to use in any public or private school chosen by the family. Of course, the school would have to meet standards that would be established by the regulating agencies. The idea is not new. It is well known to veterans under the "G.I. Bill." In addition to the voucher system, actual experimentation is underway with performance[5]

contracts. A company or agency contracts with another agency to teach or train a group of students or trainees to a specified level of performance. If the learners do not reach the level specified, the contractors are not paid or are penalized financially in other ways.

The second development, more profuse and sometimes vague, is the dissatisfaction with existing instructional patterns. Dozens of books are being written by authors who demand reform and who reflect a deep dissatisfaction with public schools by many diverse groups. (See, for example, Radical School Reform,[6] a collection of writings by some of these authors.) This discontent will not directly cause more year-round school operations, but it helps establish an atmosphere in which more experimentation will occur.

In addition to the general ferment for school change have been the efforts of several groups and individuals to get public schools to institute various models of year-round operations. George M. Jensen,[7] who served as president of the Minneapolis School Board, has widely publicized the extended use of school facilities. It is not clear what the impact of Jensen and others has been. Because these people and groups are perceived as outsiders by educators, many educators will resist their well-intentioned recommendations. Unless their ideas are picked up by groups with political clout or directly by legislators, their influences may be little.

Earlier Experiments

Many descriptions are available about early programs, such as those put into operation by Bluffton, Indiana[8] (1904-15), Newark, New Jersey[9] (1912-31), Nashville, Tennessee[10] (1927-32), Aliquippa, Pennsylvania[11] (1928-38), and Ambridge, Pennsylvania,[12] In each of these, the regular curriculum was extended into the summer months, with some measure of compulsory attendance. In contrast is the far greater number of school systems that have moved into summer programs with voluntary attendance and with remedial and enrichment objectives. Generally, these programs have only employed part of the faculty and used only part of the physical facilities. They added to overall school costs and have been justified in terms of improving the quality of educational services.

It is difficult to draw many firm conclusions about these efforts that would be good guidelines for school districts today. Many of the conclusions drawn by others are obviously laden with prior points of view and not on good evidence collected about the programs. Yet, the various accounts can be gleaned for some tentative conclusions:

1. Since compulsory attendance, year-round programs have not become institutionalized, the few earlier experiments must be judged as idiocyncratic illustrations. Some special or unique features contributed to the creation of **each** program. Once these disappeared,

the programs ended. It is not even clear from the historical accounts what these features might have been. Thus, though need for classroom space and shortage of funds are often cited as the chief causes of the Aliquippa and Ambridge programs, other districts faced similar shortages but did not move to a year-round operation. More than financial stress was involved.

2. With the possible exception of the Newark program, rigorous evaluation designs were not applied to the earlier year-round programs. One critical review[13] summed up the literature as reporting "...very little factual data" and providing "little evidence to condone or condemn year-round school operation." However, more useful information is being collected now, such as on the program in Missouri.[14]

3. The concepts and terminology are mixed and confusing. Some writers view a year-round operation as a broad, even fundamental concept, worthy enough to serve as a central, organizing theme. Other writers see all of the ideas as minor extensions of other, well-established concepts and practices. A year-round operation, to them, is an application of good management practices, a view expressed in the USOE publication, Extended Use of School Facilities.[15]

Whatever the terminology, five specific variables or criteria are involved that will define most of the unique features of the various plans so far created:

a. Is attendance mandatory during the whole school year except when a pupil is scheduled for vacation?

b. Is the established curriculum available during all periods of the school year?

c. Can students accelerate their attendance so that they will graduate in less time?

d. Does each family have the same vacation pattern?

e. Is the year divided into two, three, or four parts or periods?

Other variables are also involved, such as whether teachers are on a full-year contract or not. However, the other variables seem less related to the terminology problems than the first five. The five variables make possible at least thirty-two different combinations. This probably is the prime explanation for the confusion in terminology. Table 1 shows some of the possible combinations.

Table 1

Some Combinations of Variables Possible in Year-Round School Operation

	Required Attendance	Full Curriculum All Year	Acceleration Provided	Similar or Same Vacation	Organization
1. 45-15 Plan	Yes (180 days)	Yes	No	Yes (3 weeks each season)	Overlapping quarters
2. Atlanta, Georgia	No (Choose 3 of 4 quarters)	Yes	Yes	No	Quarters
3. "Enrichment"	No (In summer)	No	Yes	Yes	Semesters plus summer
4. "Acceleration"	Yes	Yes	Yes (Required)	Yes	Any one possible
5. "Staggered Quarter"	Yes	Yes	No	No	Quarter (staggered)

4. Many different reasons are given by the people associated with the various programs for establishing, maintaining, and ending the programs. The reasons given seem to reflect both the biases of the reporters and some of the true events. Stated explanations vary from strictly financial pressures (which, in turn, may explain little, for these pressures flow from many other causes) to concerns for quality improvements in education.

5. More than in almost any other educational innovation introduced into the public schools during this century, the community is a powerful factor in year-round operations. Other innovations do not so clearly affect the family. Many families can be unaware of modern mathematics, addition of school counselors, or the addition of new courses. Many families can be aware of but be little affected by school consolidation or the building of school libraries. However, change in school vacation patterns is both highly visible and demanding of family adjustments, sometimes even if the family has no children in school.

CHAPTER II

PREPARATION FOR THE "45-15 PLAN"

Community

The Valley View School District #96, an elementary district (K-8), grew out of consolidation of five small, rural districts in 1953, with an initial enrollment of eighty-nine pupils. The superintendent, Kenneth Hermansen, who was employed at that time, was still superintendent on June 30, 1970, when the 45-15 Plan first went into operation. Membership on the seven-man school board has been very stable since 1953.

The new district covers over forty square miles of rich Illinois farm land in Will County, just across the boundary with Cook County in which Chicago lies. The district also has been in the path of the onrushing migration from Cook County, and in another ten to fifteen years will be probably entirely engulfed with residential housing and some new industry. The district has two incorporated villages, Romeoville and Bolingbrook, south and north respectively of Interstate 55 which runs from Chicago to Springfield and St. Louis.

Several housing developments are underway, rapidly consuming the farm land. This growth is reflected in the school district which has grown from an enrollment of eighty-nine students to nearly sixty-eight hundred by late 1970. Projections for the future show a possible enrollment of twenty thousand or more students by 1980. In contrast, assessed valuation per student has decreased from $162,098 in 1953-54 to $21,440 in 1969-70. This drop is important to the school district which last year had to raise 67% of all revenues from local tax dollars.

Most of the people coming into the community have been purchasing homes in a narrow price range of fifteen to twenty-five thousand dollars. However, one recent development is offering a range of twenty-five to forty-five thousand. Many of the people are of Polish and Italian backgrounds. About seventy percent are Catholics. Few are in the professions; most of the breadwinners are in manufacturing, construction, and service industries. Most families have moved out from Cook County schools, a majority from the city of Chicago.

Despite the large number of Catholic families, only two parochial schools now serve Romeoville and Bolingbrook, enrolling less than four hundred students. It seems unlikely that this enrollment will increase unless changes in the law will allow direct tax support.

The community is rapidly changing by the influx of families, many still oriented toward Chicago. The original rural orientation

is disappearing. The original community existed in the shadow of Joliet, a large industrial river town ten miles to the south, and Lockport, six miles to the south. The students, upon leaving the junior high school, go into the Lockport high school system which has three schools and a total enrollment of thirty-eight hundred. The high school district is presently undergoing legal procedures to split into two separate districts, one nearly coterminous with the elementary district.

The largest enterprises within the Valley View School District are farming, an oil distillery, and a medical supplies manufacturer. Two retail complexes are forming, one in each village. However, these complexes are lagging behind the population growth.

Birth of an Idea

As can be easily imagined, the school district was constantly facing enrollment crises. New construction had to proceed rapidly. Double shifts were required several times. The construction schedule provided classroom space as shown in Table 2:

Table 2

School	Additions of Classroom Space for Valley View School District
Valley View	1953-54; expanded to thirty-one classrooms in 1955-59
Park View	1962-63; expanded to forty-four classrooms, 1963-64
North View	1963-64; with thirty-one classrooms
West View	(junior high school) 1966-67; with teaching stations and capacity for twelve hundred pupils
Brook View	1968-69; with sixteen classrooms
Ridge View	1969; with sixteen classrooms

In August, 1969, the school board studied the problem of crowded classrooms. At the suggestion of the superintendent, the topic of a year-round operation was opened. The board moved quickly, passing a resolution that a full study be made of a staggered plan that would allow just three-fourths of the students to be enrolled at one time. It is significant that one board member, the superintendent, and an assistant superintendent attended a conference on year-round school operation in October, 1968, at Northern Illinois University.

Nearly one hundred registered participants attended; over fifty school districts were represented, so the idea of a year-round operation was well known. Also, many other school systems were facing classroom shortages and limited revenues, though few as seriously as the Valley View School District. Yet, only Valley View made the change, so the truly unique elements or causes of this district going into the 45-15 Plan have to lie in the makeup of the people of the school board, the administration, and probably the community.

While a lot of literature was read by the staff, two questions seemed unanswerable. (1) How was the community to be won over to the idea, when so many were new to the community and relatively uninvolved in school affairs? Community resistance had clearly doomed all earlier plans eventually. (2) How could the original idea of a staggered nine-three (nine weeks in school, three weeks on vacation) plan be scheduled so that each quarter or nine weeks would have about the same number of school days, when legal holidays were not evenly distributed throughout the year?

The second problem was solved first when James Gove, while struggling with a master schedule with Pat Page, hit upon a very simple but novel solution. Instead of starting a quarter on Monday and ending it on Friday, they would start it and end it on any day of the week, when forty-five school days had gone by. The fact that the answer had not been described is surprising, considering the plethora of calendars recently published.

The first problem was tackled much like a political campaign, with meetings, coffee hours, spot radio announcements, printed materials, slides and tape presentations, and dozens of similar ideas. Future studies of the history of the 45-15 Plan might find it useful to delve into the dynamics of winning support from a community little involved in school affairs. In contrast, the successful introduction of the 45-15 Plan subsequently has focused and will continue to focus community attention on the schools, unlike almost any other innovation.

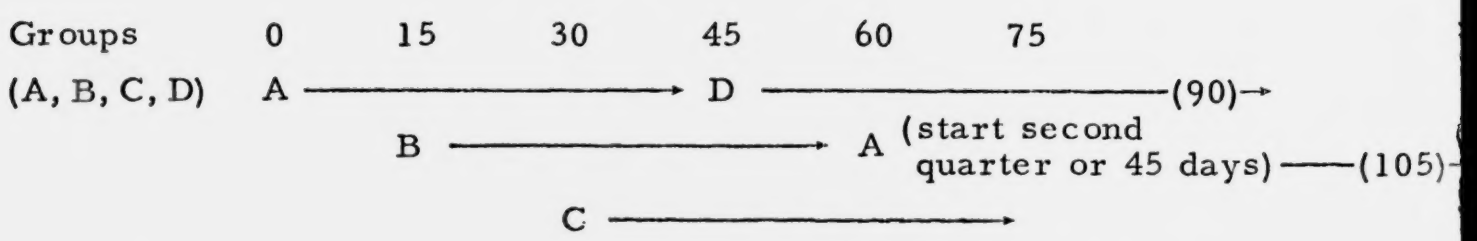
The master schedule, once worked out for two years in advance, made it much easier both to explain the plan and to anticipate other problems. The most serious of these was the scheduling of students. The school board retained the services of a private consulting firm specializing in computer programming. The solution worked out is covered in the next section.

The 45-15 Plan

The 45-15 Plan is quite simple in outline. (See Appendix B.) One-fourth of the students attend school for forty-five days. On the sixteenth day, a second group enters. On the thirty-first day, a third group enters. On the forty-sixth day, the first group goes on vacation, and the fourth group replaces them. Fifteen days later, the cycle starts all over again, as shown in Table 3:

Table 3

Cycling of Groups Under the 45-15 Plan



The obvious question for pupil scheduling is naming the students and families who are to be in each of the groups. Valley View did this by taking small geographical areas and putting all families in the area in one "track" or attendance group. Each area was called a "census unit." Prior to experimenting with various possible census units, a house-to-house canvass was taken by volunteer groups for the district to get the most accurate count possible of school aged and preschool aged children. A modest fee was paid to the canvasser. Actual schedules were then worked out to see what kind of balances were achieved among classes and attendance groups. Possible difficulties can be better seen through an illustration.

Assume that there are sixty pupils at the second grade level at each of three schools, for a total of one hundred eighty pupils. Under the traditional schedule, each school would have two second grade classes. Under the 45-15 Plan, only forty-five of these students would enroll on the first day of school, unless some other arrangements were made. At least three possible alternatives exist: (1) Enroll thirty in the first and third groups, and sixty in the second and fourth. (Note that if the throw of the dice puts forty-five students at one school under the traditional plan, two small classes must be formed or fifteen of the students must be bussed to another school.) This solution requires a study on the effect of the other grades, because all children from one family must be kept in one attendance group. (2) Expand or contract age or mental range within a class, thereby shifting some students by grade level. (3) Combine two groups, with the teacher starting with fifteen pupils for fifteen days, and then joined by fifteen additional students from the next attendance group.

The illustration was deliberately chosen as a difficult problem to solve. The actual solution to this type of problem was to adjust census units (in effect, school boundary lines) until a suitable balance was reached.

Once the student scheduling had been accomplished, most other problems could be solved readily.

Teacher scheduling. Teachers could be employed for just 184 days (180 school days plus four days of inservice training), or

could be given longer contracts, on up to 244 days which would mean that the teacher would be employed through all of the days of the year during which pupils attend. Actually, the teachers were given as much choice about length of contracts as possible. As a result, contracts varied from 184 days to 274 days for the first fiscal year. Contracts for the first year could go from June 30, 1970, through August, 1971, inclusively. Over half of the women teachers took the minimum contract of 184 days while about 43% of the men teachers accepted 274-day contracts. A higher number of the short contracts were issued for teachers in grades one to three, with 61% working 184 days.

One innovation created by the teachers made some scheduling problems simpler for pupils and teachers. Three teachers would go together to form a "cooperative," assuming responsibility for 120 pupils but with only 90 in attendance at any one time. About half of the teachers, grades K through six, adapted this team approach during the first year.

Non-teaching professionals and other personnel. Because the 45-15 Plan allows one-third greater use of existing physical space (in effect, an extra sixty days per year), the teachers, administrators, non-teaching professionals, and support personnel who would have been needed in the buildings not built were not employed except when less than a full-year contract was issued. Sometimes replacements were employed. Actually, no new positions were created and some positions were left vacant for short periods of time if the person did not sign a full-year contract. As the administrators were already on eleven-month contracts, they were, in effect, given a different kind of responsibility for two months. Previously, during the summer months, they used their time away from daily school operations. Now the school operates through the summer months. Librarians, counselors, special teachers, maintenance personnel, bus drivers, and others were also given longer contracts or were employed for more days each year.

Phasing in. The district had to decide whether to gradually move into the 45-15 Plan or to start three groups at once. They chose a gradual phasing in that extended from June 30, 1970, to August 11 when the third attendance group enrolled. The first group, starting in June, gave up its traditional summer vacation and instead received four three-week vacations (fifteen school days), one during each season of the year. The last group entered on September 1, 1970. This group not only received the traditional summer vacation but also the four three-week vacations throughout the year. However, the year's academic work would not be completed until the end of August, 1971. The phasing-in procedure, as used by Valley View, is the only feature that clearly treated different attendance groups in different ways, but only for the first year. In contrast, the Becky David School began three of the four groups at once in order to get in all of the required school days. This must be contrasted to the "staggered quarter" plan in which one-fourth of the families receive "unfair"

treatment by being assigned to winter vacations. In addition, if Valley View had wanted to solve the extra problems of starting three groups at once, then even that differential treatment would have been removed. However, the principals unanimously reported that the gradual phasing-in made the opening day of classes the easiest that they had ever experienced. They had about a fourth of the opening day enrollment of the previous year.

Classroom scheduling. Each principal and his staff were faced with a choice of three or more options in the assignment of classrooms to teachers and pupils. Under the "cooperative" plan, three teachers would have three classrooms to use as they wish for 120 pupils, 90 in attendance at any one time. If a teacher had a 184-day contract, then she and her pupils would go on vacation at the same time, but come back to a new classroom because the classroom they vacated would be taken up by the next attendance group that returned when they went on vacation. If a teacher had a 244-day contract and was not part of a cooperative team, then she could remain in one room but would receive a new group of students for each quarter. Another possibility would be for her to be assigned other duties, such as substituting during the fifteen days her pupils were on vacation. All of these alternatives actually were used, plus some others.

Other considerations. Many other decisions had to be made to complete the scheduling of pupils and staff. These are briefly listed below:

1. All children from a family are to be in the same attendance group.
2. A census unit should respect the sociological dimensions of a neighborhood.
3. Pupils within walking distance of a school should attend that school.
4. Pupils should remain at one school for a year.
5. Class size must vary no more than in previous years.
6. Elective courses at the junior high school must be equally available to all attendance groups.
7. Transportation policy would remain basically the same for the first year of operation.

Legal Dimensions

In February, 1969, the Cook County superintendent issued a publication that said, "The law is rather inflexible; certain changes in the law are necessary." Informal legal opinions also upheld this

view. Hence, new legislation was passed that removed some of the ambiguity in the school code. The bill was signed into law by Richard Ogilvie at a ceremony in the school district on June 29, 1970. (See Appendix C for some of the Illinois legislation that directly applies to the 45-15 Plan.)

CHAPTER III

VALLEY VIEW SCHOOL DISTRICT #96 ON JUNE 30, 1970

Because earlier year-round operations were not sufficiently documented, a major effort was made through this project to provide baseline data by which to measure the consequences of the 45-15 Plan. Data were collected on faculty morale and attitudes, student achievement, evaluation priorities, community support, finances, and other dimensions.

Most of the data was collected within the two-month period just prior to the opening of the program on June 30, 1970. There were two exceptions. Student attitudes were sampled shortly after the students enrolled, and community support was sampled on different dates for each attendance group. Since pupils in the last group did not enter until September, the data were collected in August, after the first group had already entered school.

A. PROFESSIONAL STAFF

On May 15, 1970, the entire professional staff of Valley View School District #96 was asked to complete a questionnaire titled, "Final Professional Evaluation," while attending a final, general meeting about the 45-15 Plan, scheduled to start on June 30, 1970. (See Appendices A and D.) A total of 240 questionnaires were returned, though 79 were not fully completed. The incomplete ones were compared by individual item with the 161 completed ones to see if significant differences existed be tween the two groups. While none were found that reached the 1% level of confidence, the two groups were analyzed separately as well as a combined sample.

Two general kinds of analysis were made. First, a formal factor analysis was made of the items used in the questionnaire as well as a study of items of similar face content. Second, comparisons were made by individual item by splitting the total sample (incomplete and complete combined) by six different criterion variables. These were by grade level (elementary, intermediate, and junior high school), whether a member of a cooperative team, professional role, sex, age, and whether the individual predicted he would be still working in the school district at the end of two years of the 45-15 Plan.

Close study of the 161 questionnaires fully completed led to these results:

1. Only a small percentage of the staff showed mild or strong objections to the 45-15 Plan. The largest percentage involved (12%) indicated the belief that the 45-15 Plan would not be in operation in five years. On the other hand, a majority (59%) said they mildly or heartily agreed with the statement that "...the 45-15 Plan is the most exciting educational innovation I have ever participated in."

2. The faculty were less certain about student learning under the 45-15 Plan. For example, about 43% thought students would learn more because of several short vacations rather than one long summer vacation. However, about half said they would not make a prediction one way or the other, though only about 7% thought learning would be less. Also, over half of the faculty thought absenteeism would be higher during the summer.

3. There was even less agreement by the faculty about the possible impact on the faculty themselves. On five items dealing with faculty behavior, from 31% to 50% of the respondents said they did not know or had mixed reactions about the statements. Most agreement (56%) was with the statement that a higher proportion of men teachers would be employed if the 45-15 Plan lasted for five years. About a third (29%) thought teachers would become "tired and worn out" if employed under a 244-day contract.

4. The staff also was not in agreement on the possible relationships between the 45-15 Plan and other innovations. About a fourth (25%) thought individualized instruction would be easier under the 45-15 Plan but an almost equal number (27%) thought it would be more difficult. A similar pattern of thought was shown on items that related the 45-15 Plan and intra-school relations. Thus, about 25% thought trust between teachers and administrators would increase but about 19% thought it would decrease.

5. The staff showed mostly positive or neutral opinions about the reactions of the community. Thus, over a third (39%) thought families would get used to short vacation and would give mild or strong support after one year. Smaller proportions (10 to 27%) believed that the community would become more negative shown on items such as families moving in or out of the community and the mood of taxpayers.

6. The faculty were given maximum possible freedom in selecting the length of their contracts, varying from 184 to 244 days for one fiscal year. This apparently accounted for the 77% who were happy about the length of their contracts, compared to 9% who expressed dissatisfaction. An even larger number (80%) were happy with the attendance group they were initially assigned to, though this would not be an important question to most of those who had 244-day contracts. In contrast, only 19% were happy with their salary schedule, while a much larger number (54%) said they were mildly or strongly dissatisfied.

7. Surprisingly, large numbers of the faculty thought that costs per child would increase for administration, maintenance, and instructional materials, and that only building costs would go down. Forty-four percent of the faculty thought maintenance and repair costs would go up, 35% thought so about administrative costs, and 34% for instructional materials and equipment. This is in contrast to the expectations of the administration and school board that all of these costs per child certainly would not increase and hopefully would decrease.

Factor Analysis

The data of the 224 completed or nearly completed questionnaires were submitted to a factor analysis. A program for missing data correlations was used. First a principal axis analysis was made and then an orthogonal rotation. Both approaches brought out a general attitude. This factor accounted for 12.7% of the variance under the principal axis and 13.6% with the orthogonal when ten factors were processed. The items with heaviest loadings in each are listed below:

Table 4

Principal Axis

Item	Topic	Loading
6	Principal's understanding	.51
8	Respondent's attitude	.64
9	Planning done	.59
11	Student achievement	.56
12	Family adjustment	.63
26	Life span of 45-15 Plan	.52
27	Parental attitude	.55
29	Use of individualized instruction	.52
39	Teacher-student trust	.51
40	Teacher-administrator trust	.54
42	Excitement of 45-15 Plan	.62

Table 5

Orthogonal Rotation

Item	Topic	Loading
8	Respondent's attitude	.42
25	Need for inservice training	.41
26	Life span of 45-15 Plan	.50
27	Parental attitude	.48
34	Building costs	.41
37	National image	.66
39	Teacher-student trust	.44
41	Taxpayer attitude	.53
42	Excitment of 45-15 Plan	.52

The items overlap to a considerable degree in both analyses on the first factor. Inspection of individual items shows the items to be general in nature.

Subsequent factors accounted for a lot less variance under the principal axis analysis (6.5%, 5.0%, 4.4%, 4.2%, etc.). However, the orthogonal rotation dropped off less (12.7%, 11.1%, 10.9%, 9.7%, etc.).

Analysis by Criterion Variables

All of the questionnaires were subjected to analysis by comparing means of individual items. A "strongly agree" was scored as a "1," on up to a "5" for a "strongly disagree." T-tests on the differences between the means were computed. Items with the largest t-values are discussed below. Fewer significant differences were found than anticipated. As the degrees of freedom were within a very narrow range (179 to 228), a t-value of 2.00 was considered significant at the 5% level of confidence and 2.65 at the 1% level for all items discussed. Hence, all differences that reached a t-value of 2.00 are included in the next five tables. A mean over 3.00 means more disagreement than agreement with the statement.

Table 6
Grade Level Differences Among Teachers
(High means indicate disagreement.)

Item	Primary vs Intermediate	Primary vs Junior High School	Intermediate vs Junior High School
1. Length of contract is satisfactory		Mn = 1.36 Mn = 1.78 t = 2.06	
5. Attendance for own family is satisfactory	Mn = 2.75 Mn = 2.25 t = 2.22		Mn = 2.25 Mn = 2.73 t = 2.18
6. Principal's understanding is good	Mn = 1.68 Mn = 2.04 t = 2.18		
13. Track A families will be most negative			Mn = 2.43 Mn = 2.87 t = 2.25
18. Community will adjust to vacations		Mn = 3.01 Mn = 2.60 t = 2.12	
21. Maintenance costs will go up	Mn = 2.75 Mn = 2.34 t = 2.02		

Since all of the values of t in Table 6 just barely exceed the 5% level of confidence, it seems that few if any important differences exist among the teachers according to grade level. Furthermore, since all means but one are below 3.00, more agreement is indicated for the statements than disagreement.

Table 7
Differences Between Teachers
On or Not Members of Cooperative Teams
(High means indicate disagreements.)

Item	Cooperative Mn	t	Non-Cooperative Mn
4. Cooperative teams are a fine arrangement	1.80	4.60	2.62
5. Attendance cycle for own family is satisfactory	3.69	3.15	2.79
11. Students will do better academically because of short vacations	2.73	2.34	2.36

The results on Item 4 are to be expected. Since membership on the cooperative teams was voluntary, it would be expected that those who anticipated being members would be more positive. The dissatisfaction of team members with the attendance cycle for their own family might have been due to the fact that the cooperative team members signed longer contracts and thereby would work through the vacation periods of their own children. Logically, however, changing the tracks of their own children would not help, at least for those with 244-day contracts. They would work through all vacation periods of their own children.

Table 8
Differences Between Teachers and Administrators
(High means indicate disagreement with statements.)

Item	Teachers Mn	t	Administrators Mn
6. Principal's understanding of 45-15 Plan is good	1.82	2.45	1.10
7. Principal's attitude toward 45-15 Plan is good	1.58	2.60	1.09
8. Own attitude toward 45-15 Plan is good	1.99	2.36	1.20
12. Families will adjust vacations	2.70	2.11	2.00

Table 8, Differences Between Teachers and Administrators (continued)

Item	Teachers Mn	t	Administrators Mn
13. Track A families will be most negative	2.57	2.66	3.50
17. It will be harder to teach under 45-15 Plan	2.64	2.44	3.70

The administrators felt themselves more positive than the teachers thought they would be about the 45-15 Plan. The administrators disagreed on two other key issues. They felt it would be easier to teach under the 45-15 Plan than did the teachers, and they were more optimistic about families making the necessary adjustments with their vacations.

Table 9
Differences Between Male and Female Staff Members
(High means indicate disagreement.)

Item	Men Mn	t	Women Mn
3. Own salary is satisfactory	3.57	2.12	3.13
16. Elementary should have more men teachers	1.73	2.94	2.24
29. Individualized instruction is coming	2.77	2.71	2.36

The men expressed greater dissatisfaction with salary than women but were more positive toward employing more male elementary teachers. The men, perhaps because of the larger proportion in the junior high school, were less certain about adoption of individualized instruction though both groups had a larger number who thought it would be coming than those who did not.

Table 10
Differences Between Groups with Short and Long
Employment Expectations in Valley View School District #96

Item	Expecting two or more years of employment Mn	t	Expecting less than two more years of employment Mn
8. Own attitude is good toward 45-15 Plan	1.67	3.24	2.07
18. Community will quickly adjust to 45-15 Plan	2.60	2.63	3.04

Table 10, Differences Between Groups with Short and Long Employment Expectations in Valley View School District #96 (continued)

Item	Expecting two or more years of employment Mn	t	Expecting less than two more years of employment Mn
26. The 45-15 Plan will be here in five years	1.98	3.10	2.47
28. Teacher turnover will be reduced	2.58	2.17	2.93
38. Teacher effectiveness will decrease under 45-15 Plan	3.52	2.57	3.05

The differences are all in the expected directions, if one assumes that the group expecting short employment in Valley View would be generally more negative about all features of the school system.

Because age was a continuous variable, correlations instead were used. The highest correlations with age are given in Table 11:

Table 11
Correlations Between Age and Specific Items

	Item	r
45.	Professional role	.25
16.	More men needed for elementary education	.14
9.	Planning by administrators (excluding principals) has been good	.14
30.	Greater variation in class size will result	-.13
29.	More individualized instruction will result	-.13
4.	Cooperative teams are good	.12
38.	Teacher effectiveness will decrease	.12

B. COMMUNITY SUPPORT

Understandably, the school board was deeply concerned about the acceptance of the 45-15 Plan by the citizens of the school district. Hence, both questionnaires and interviews were used. The complete results are given in Appendices F and G.

First, a sample of 400 families was selected, 100 in each attendance track. Each track is composed of families living in "census units" which are small geographical areas with some indication of neighborhood ties. Each school is attended by a nearly equal number of children in each of the four attendance tracks. One attendance track is always on vacation. The sample was drawn from both villages, all of the major housing developments, and the rural areas of the district.

Questionnaires were hand-delivered and collected, resulting in 95% return. This was to reduce possible resistance to the evaluation effort. However, the high return did require one or more follow-up contacts with some families.

This baseline data showed that almost no differences of importance seemed to distinguish one attendance track from another. The one exception was the length of residency in the community. Apparently because of the larger number of rural residents in Track C, their average residency was about 7.4 years as compared to 4.5, 4.6, and 4.8 years for the other three. However, this difference did not seem to cause any other significant differences between the one track and the other three. On items that could be compared by differences between means, only one other item was statistically significant, that of the rating of elementary teachers. Track D was more positive that B. On other items where means were not appropriate, five items produced Chi^2's large enough to reach the 5% level of significance or higher. Again Track D was more positive on Items 9 and 11 (use of tax money and the 45-15 Plan) but showed on Item 14 that they would be more willing to change their mind about the 45-15 Plan. On the other hand, Track A talked to more people they judged informed about the 45-15 Plan. This may have been because they were the first track scheduled to enter school which was June 30, 1970. Successive tracks each entered fifteen school days after the previous one. Also, Track A was less certain that saving administrative costs was one of the prime reasons for adopting the 45-15 Plan.

Only one statistically significant difference was found through the interviews which seemed of no practical significance. On one question, two tracks had fewer answers than the other two.

Together the interviews and the questionnaires present a picture of the mood and the expectations of the community just prior to their entry into the 45-15 school operation.

1. Most citizens were positive toward the school system and the 45-15 Plan, though a small number were negative. However, it is important to note that these were general attitudes. Few people showed one attitude toward the district in general and another just toward the 45-15 Plan. A factor analysis on the rating items from the questionnaire showed a general attitude that cut across all specifics such as bus schedules, instruction, teachers, principals, school board, and the 45-15 Plan.

Table 12
Ratings Given by Citizens to Specific Statements

	Excellent	Good	Average	Poor	Very Poor
1. Information about the 45-15 Plan	76	125	83	21	25
2. Worth of the 45-15 Plan	81	94	34	20	31
3. Efficient use of tax money	17	64	95	41	47

2. While a large minority of the respondents expressed an interest in the money that the Plan might save, the majority showed more concern about the effects on students than anything else. A total of 278 said they would support the Plan even if no money were saved but the children learned more. A much small number, 45, said "no" to the same question, while 64 were not certain. A total of 276 said they would not vote for higher taxes to avoid the Plan.

Thus, the citizens had varied reactions when faced with hypothetical alternatives and possible outcomes of the 45-15 Plan:

	Yes	No
a. Would you vote for higher taxes to avoid the 45-15 Plan?	37	276
b. Do you believe that the 45-15 Plan will actually save money for the district?	154	115
c. If students learn more under the 45-15 Plan but no money were saved, would you then support the Plan?	278	45
d. If the Plan were to save 5% on educational costs, but students did not learn more, would you support the Plan?	155	163

3. While a large majority thought they had received good information about the Plan from the school district personnel, and had talked a lot among themselves, most did not feel themselves or their neighbors well informed.

4. The school board and the project staff wanted to sample the opinions of the community in a way not to upset the people involved. For this reason questionnaires were hand delivered and interviewers were rated by the families after the interviewer had left. The ratings showed unanimous acceptance of the interviewers. Hence, many probably became more positive toward the school district. This provides the interesting illustration of evaluation being used to influence the very population being "measured" as contrasted to the researcher's desire to measure without changing the population being measured.

5. Without actual experience, families were unclear what the 45-15 Plan would do to their vacation habits. A majority thought no changes could occur, partly because most could not afford long vacations away from home. If the family were to stay at home anyway, then when the vacation occurs makes little difference.

6. While a large proportion of the families thought school should help children to become more employable, all of the families interviewed with sons thought their own boys had to seek better jobs by going to college. All but six felt the same way about their daughters.

7. Most of the 400 respondents believed that over-crowded classrooms was one major reason for adopting the 45-15 Plan but surprising numbers chose other reasons as well, such as saving money (254), improving instruction (144), and saving instructional costs (87).

C. STUDENT ACHIEVEMENT

A carefully selected sample of 736 pupils, grades one to six, was chosen to establish a baseline for achievement. The sample was stratified for verbal intelligence, school, sex, attendance group, and grade level. See Appendix E for the complete analysis. All pupils were categorized by these variables and then were randomly selected within each cell. Since intelligence is not a discrete variable as are the other four, quartiles were established and an equal number was taken from each quartile. This established a total of 760 cells (schools [5] × grades [6] × sex [2] × attendance groups [4] × intelligence quartiles [4] = 760). However, some schools did not have grades four or five or six, so filled cells could reach a maximum of 736. Still, a few cells were vacant. T-tests on differences between means were calculated to see if significant differences existed. If the

differences approached significance or were significant, means were adjusted for the missing means and t-tests were re-calculated. No changes were large enough to shift any t-values from significance to insignificance, or vice versa.

The following general conclusions can be made on the data:

1. No significant differences exist among attendance groups.

2. Several significant differences exist among schools. Hence, any long-range evaluation must take these differences into account. One school was almost consistently lower than the others in grades one through three on sub-tests, with the differences reaching the 5% level of confidence or better about one-third of the time.

3. Families more recently moving into the school district have children who achieve at a significantly lower level than those who have been in the system for two or more years. Hence, long-range evaluation must also take this finding into account.

At the junior high school level, the achievement of grade seven only was examined. No significant differences were found among the attendance groups.

D. FINANCIAL COSTS

Overview

The Valley View School District #96 went into the 45-15 Plan because the district had exhausted its legal limits (5% of assessed evaluation) in raising taxes for the construction of new buildings. It is not possible to say what the ultimate limits the taxpayers would have imposed upon themselves. Because the legal limit had been reached, the district was forced to consider other alternatives. Double shifts had been tried on a small scale but were disliked by pupils, educators, and parents alike. Some space was gained temporarily by large class sizes, another alternative not acceptable to anyone. Hence, some form of an extended school year became more and more attractive. Initially, at least, saving money was not a prime motive for adopting the 45-15 Plan. Only later did the full implications of possible savings in tax dollars become evident.

Writers on year-round operations have voiced opinions varying from claims of great savings to statements that the intention was to spend more money. W. Scott Bauman[16] made a case for a total savings of almost 12%. In contrast, the Fulton County (Georgia) Board of Education issued a document[17] saying that the objective of their plan "...is not to save money...." Their intent was to expand curriculum offerings throughout four quarters, one quarter being in the summer.

Bauman's projections on the staggered quarter plan must be considered optimistic, even unrealistic. His figures showed the biggest savings in salaries of the instructional staff. He assumed that teachers would move from 180 days of instruction to 240 with a salary increase of only 20%. It seems highly unlikely that organized teacher groups will settle for anything less than a full 33-1/3%. Not unless almost all of public education were to move to year-round operations does it seem likely that the instructional cost per student per day might be reduced by year-long contracts.

Terminology itself may have helped delude writers into thinking that year-round contracts would cost less money per child, when they used the terms "nine-month" and "eleven-month" contracts. Those two numbers are misleading. Most compulsory year-round plans, especially the quarter-based models, actually add <u>one-third more days of work</u>. Teachers will expect to be paid accordingly.

Another factor almost never discussed in financial projections is the effect that year-round plans will have on the supply and demand for teachers. Each school system adopting some form of a year-round operation and offering year-long contracts reduces the need for teachers by one-fourth. Unless a district were expanding very rapidly, as Valley View is, the teaching force would tend to be made up of older teachers, higher on the salary schedule. Again, a long-range trend might counter this because a smaller teaching force might increase the supply and thereby reduce salary schedules. However, it seems that organized teachers will no more let this happen than allow twelve-month people to work for less per month than nine-month people.

Bauman's other major projected savings were through reduced capital outlay (4.2%), plant operation (1.4%), and interest on debt (1.2%). These appear to be realistic expectations. Of course, exact projections would depend on depreciation schedules, building costs, interest rates, and other variables.

He assumed minor savings on textbooks and supplies (0.3%), insurance and other fixed costs (0.1%), and transportation (0.1%). He assumed none for administration, plant maintenance, health and food services, and other programs.

Unfortunately, good cost accounting procedures were not used in earlier year-round programs though good figures should be available soon on existing programs. Most early writing shows only subjective conclusions or conclusion without supporting evidence.

Finally, consider[illegible]n must be given to another subtle but significant possibility. Taxpayers and legislators want action on their demands for more accountability. Even if the savings on compulsory attendance year-round operations amount to no more than 5%, attitudes may vastly improve. For example, the voters of the Valley View District approved three referenda in August, 1970, by a margin of two to one. In contrast, a large majority of referenda

in the Chicago Metropolitan area are presently failing. Perhaps educators can win better voter support by demonstrating through year-round operations that they understand and are responsive to taxpayer demands.

Special Considerations for Valley View

The single major saving for the Valley View School District is the postponement of new construction until the expanding enrollment is absorbed into the classroom space gained by moving to the 45-15 Plan.

On June 26, 1970, the last day of classes under the traditional school year, there were 5,500 pupils enrolled. The district had a stated capacity of 5,290 so there already existed over-crowding. On June 30, 1970, the 45-15 Plan began. The next day, July 1, 1970, Illinois state law required public schools to offer kindergarten to all families who wanted it for their five year olds (as of December 1 of the school year involved). This immediately raised potential enrollment by 660, counting each pupil as a half-time equivalent, since kindergarten pupils attend half-day sessions. In addition, the projected increase for grades one through eight was another 600 per year.

In summary, the 45-15 Plan increased classroom capacity from 5,290 to 7,053, or by 1,763 spaces. Total enrollment is expected to be about 6,750 by June, 1971, and equal to the 7,053 figure by September, 1971. This means, in effect, that the 45-15 Plan allowed the school district just a little more than a year in postponed construction, so great is the enrollment growth. Fortunately, the 45-15 Plan will continue to add one-third to the capacity of new classroom space when building must resume. The next school is expected to be open by January, 1972. When the actual costs of construction are known, then it will be possible to give a firm estimate on the savings to the school district provided by the 45-15 Plan. Lacking those figures, the following assumptions have been made about possible savings.

Working with the Illinois School Building Commission, Valley View School District is planning a new building with a capacity of 1,125 or the equivalent of thirty-five classrooms, costing $31,800 a piece. Adding sitework ($33,390) and moveable equipment ($35,000) makes a total of $1,181,390. Assuming interest would raise the total cost ($1.80 to get $1.00) to $2,126,502 over a twenty-year period, the average cost would be $101,632 per year.

Without the 45-15 Plan, this building would have been needed for the 1970-71 academic year. This would have meant an extra cost of nearly $81 per pupil for the 1,200-pupil enrollment increase. With the 45-15 Plan, this cost of construction is saved. If the savings are parcelled out over the total school system (6,700), it amounts to about $16 per pupil, or about 2% of the total budget.

Avid supporters of various year-round operations may be disappointed by such a small percentage figure of savings. However, several additional costs, if managed well, might raise savings to 4% or 5%.

First, building costs may continue to accelerate. Even if interest rates should drop some in the near future, they will certainly be more than offset by construction-cost increases. Hence, reduced construction might save more than 2%.

Second, equipment maintenance and replacement can be reduced through careful control. For example, if eight buses were needed during a nine-month year, then six probably would suffice on a year-round schedule. Maintenance would be for more months of the year, but on only six instead of eight vehicles. Of course, the savings on purchasing only six instead of eight buses might not be realized until the need arose. A district with stable enrollment might have to wait until existing equipment wore out.

Third, many school districts pay administrative and maintenance personnel through the year. It is unlikely that districts would proportionately increase administrative costs if they increased the number of pupils served without increasing the number of school buildings used.

Fourth, some savings would be realized in reduced need for textbooks and other instructional materials. Instructional materials would be used one-third more each year and thus face more intense wear and tear. However, replacement is also determined by the out-dating of materials.

Valley View School District anticipates some savings in all four of these areas, but only experience will show the actual amount. It is less clear about the direction of two other costs.

Heating in the winter is expensive in northern Illinois. The fuel bill for the schools during 1969-70 totaled $40,291.67, or an average of $6,715.27 per school. In contrast, air conditioning will cost considerably less to operate, but capital outlay is required.

While equipment generally will be less costly, the 45-15 Plan has two characteristics that may raise pupil transportation costs. First, the fourth of students on vacation are not all located in one locality of the school district. Rather, each neighborhood served by one school has its own pocket of pupils on vacation. Hence, the total distance traveled by the buses is not reduced by one-fourth when the enrollment is dropped by one-fourth. Second, the enrollment for each school is increased by one-third. In effect, this expands the size of the neighborhood served by the school. That third would tend to come from further out and thus be more likely eligible for busing. However, this factor may be less important in Valley View because busing is already used a lot to achieve class size balance.

All of the above conjectures have been summed up in the table below. On the left hand side are the actual detailed costs for one pupil under a nine-month year. On the right hand side are the projected costs in Valley View when the enrollment has gone up by one-third. It should be noted that an established district with relatively stable enrollment might realize no savings whatsoever by moving to year-round operation and maintaining the existing quality of instruction until one or more years had passed. However, if it were to expand the quality of its education, especially by offering more days of instruction, then the projected savings could be immediately realized.

One pleasant aspect remains, however, for supporters of extended-year programs. If a school district is growing in enrollment, and if the debt retirement is great, then a greater savings per pupil will be realized as demonstrated in Table 13. Thus, for the 1969-70 academic year, the district paid out almost $88 per pupil for debt retirement. Spreading that debt retirement over a third more students would reduce the per pupil cost to about $66 for debt retirement. In summary, the estimated savings on net current expenditures per pupil would be $10.39 and on other costs, $22.59, for a total of $32.98. The percentages would be 1.6, 16.0, and 4.1%.

Table 13
Cost Per Pupil on Two Bases of Comparison
(Figures rounded to $100)

	Valley View 1969-70 (Enrollment 5,580)		Valley View Under 45-15 Plan (7,440 enrollment)[1]	
	Total	Per Pupil	Total	Per Pupil
Administration	$ 208,000	$ 37.27	$ 238,000[2]	$ 31.98
Instruction	2,859,300	512.42	3,800,000[3]	510.75
Health	34,200	6.13	45,600	6.13
Operation	389,900	69.87	500,000[4]	67.20
Maintenance	34,100	6.11	40,000[5]	5.38
Fixed charges	163,200	29.25	217,600	29.25
Other (Except food)	45,100	8.08	60,000	8.06
Net Current	$3,733,800	$669.14	$4,901,200	$658.75
Transportation	296,400	53.12	390,000[6]	52.42
Debt service	488,400	87.53	488,400[7]	65.65
Capital outlay	(766,000	(137.27)	(766,000)[8]	(102.96)
	$ 784,800	$140.65	$ 878,400	$118.06
TOTAL	$4,518,600	$809.78	$5,779,600	$776.82

1 Assumes enrollment expanded one-third and no inflation.

2 Assumes two additional administrators, one to help with scheduling.

3 Assumes some savings in small equipment and materials.

4 Assumes janitors work less hours during vacation periods.

5 Assumes some increase in repairs but not proportionately.

6 Assumes some savings in equipment but this may be optimistic because extended routes may wipe out this difference.

7 Actually interest would drop a bit each year as principal was paid off.

8 An expenditure but not chargeable because it is reflected already through debt retirement.

E. STUDENT SURVEY

Questions were asked of pupils in grades 4, 5, and 6. No significant differences were found between grade levels or attendance tracks. Hence, the means of the nineteen items of the survey are given in Table 14. The means were tabulated from numbers based on the following weights:

Weight	Statement
1	Always true, happens all of the time
2	Usually true
3	True about half of the time
4	Sometimes true
5	Not true, I never have observed this happening or I never do this

Table 14
Means of Responses of Students in Grades 4, 5, and 6

Mean	Item
2.1	My teacher makes assignments that are clear and easy to understand.
3.2	There is less noise in the school than last year.
1.6	I do my assignments on time.
4.7	I am late for class(es).
2.2	I like this class.
4.3	My teacher wants me to do too much work.
3.0	My teacher makes the class work exciting.
3.0	My teacher picks on certain students in the classroom.
4.3	My teacher is "crabby."
4.9	Two or three teachers work together in this classroom.
4.5	My teacher criticizes (complains about) the 45-15 Plan.
4.0	My teacher asks me what I think about the 45-15 Plan.
4.0	I make higher test scores or grades than anybody else in this class.
3.7	I talk more than anybody else in this class.
3.8	I have more trouble with my assignments than anybody else in this class.
3.2	I say good things about the 45-15 Plan.
4.0	I feel unhappy when in school.
4.6	I wish I were in another vacation track.

CHAPTER IV

EVALUATION AND RESEARCH DESIGN

A. INTRODUCTION

As part of the planning that the school district had given to the development of the 45-15 Plan, evaluation problems were carefully considered. However, the funds made available through this project provided the extra resources to do the task more efficiently.

It was immediately apparent that the objectives of evaluation and research might be overlapping, but that they were not identical. The problem was made very clear when a priority list was checked by the school board (seven members), the top administrators (five), and outside experts (fourteen). (See Appendix A, "Priority Concerns Check List.")

The outside consultants were a group of persons attending a conference on the 45-15 Plan with the objective of discussing possible research designs. The group was made up of ten faculty of a state university, three from outside of education. The other four were graduate students in education.

Table 14
Information Judged Essential to Collect
on the 45-15 Plan by Three Reference Groups

Type of Information	Valley View School Board	Valley View Administration	Outside Experts
44. Jobs and earnings of teachers on other jobs	3	2	3
19. Industries attracted because of the school district	3	2	1
2. Teacher salary schedule compared to other districts	2	5	0
4. Community recreation and amusement	2	3	4
5. Absenteeism, truancy, and delinquincy	2	3	9
6. Teacher fatigue	2	5	9
7. Costs of maintenance and repair	2	4	5
10. Kinds of families moving into community	2	1	8
11. Kinds and amount of work by mothers	2	1	4

Table 14, Information Judged Essential to Collect...(continued)

Type of Information	Valley View School Board	Valley View Administration	Outside Experts
16. Costs of transportation and air conditioning	2	4	4
18. Summer absenteeism and teacher attitudes	2	4	5
22. Teacher characteristics	2	3	3
26. New teacher instructional techniques	2	2	10
30. Total cost per pupil	2	4	7
32. Characteristics of non-teaching staff and school board	2	1	1
38. Use of information about pupils by teachers	2	4	1
39. Achievement tests of alienated and gifted pupils	2	3	9
48. Teacher effectiveness	2	5	4
3. Average number of days worked by teachers	1	4	1
24. Teacher demands as expressed in negotiations	1	4	5
50. Trust between teachers and administrators	1	3	1
45. Personnel policies in district	1	3	3
12. Cost per child for teachers, other personnel	1	4	5
31. Size of class and variations	1	4	3
14. Kinds and amounts of further training	1	2	5
20. Attitudes of parents toward the schools	1	5	8
13. Loneliness felt by children during vacations	1	2	5
21. Student achievement	0	3	7
52. Functions performed by teachers and administrators	0	3	6
33. Costs of substitutes, other supportive personnel	0	5	1

Table 14, Information Judged Essential to Collect... (continued)

Type of Information	Valley View School Board	Valley View Administration	Outside Experts
7. Attitudes of students toward school	0	2	12
17. What students do during vacations	0	1	6

Table 14 shows some of the agreements and disagreements by the staff. The two major concerns of the school board (outside jobs of teachers and industries attracted) were not shared by the experts, but mildly so by the administrators. In a more general way, the board members showed concern for the impact on the community by the 45-15 Plan (Items 4, 10, 11, and 19). The board showed less concern than might be expected for the costs of the program and the impact upon the teachers, but the administrators said this was their top concern as shown in these types of items (2, 6, 8, 9, 22, 26, 30, 32, 38, 44, and 48). In contrast, the outside consultants expressed interest primarily in teacher fatigue, new instructional techniques, and total costs.

The consultants in turn expressed deep interest in some items that were of less concern to the school board or the administrators, notably the three items about student reactions--loneliness during vacations, attitude of students toward school, and use of vacation time. Both administrators and consultants shared some concerns not rated as high by the school board, such as the functions performed by the teachers and administrators.

However, many items were of concern to all three groups such as absenteeism, teacher fatigue, total costs, pupil achievement, and new instructional techniques.

These findings are not presented as a basis to generalize about these three groups but to illustrate the dilemma posed for the evaluator who must choose between serving the legitimate concerns of the school board and serving a wider research community. Since the intent of this project was both to serve the district and to serve a wider audience, compromises had to be made.

B. A RATIONALE FOR EVALUATION BY THE VALLEY VIEW SCHOOL DISTRICT

In order to gain acceptance for the evaluation supported by this project, a point of view was presented to the school board and the administrative staff. The point of view that was presented can be summarized thus:

The Valley View School District #96 has embarked on a historical innovation which will be recorded in school administration textbooks for a long time. Yet, the 45-15 Plan may be widely disseminated for reasons that have little to do with the true merits and shortcomings of this kind of year-round school operation. An equally significant innovation would be to support the changes taking place in the school district with a model evaluation program. School administrators, taxpayers, and legislators would welcome pace-setting evaluation and accountability efforts. In fact, all legislative bodies in the United States have moved toward firmer demands that educators prove they are using tax monies effectively. "Accountability" is a term heard with great frequency.

Hence, it seems highly appropriate for the Valley View School System to move toward a good evaluation effort. Not only does the profession need better information about the effectiveness of specific educational programs, courses, and activities, but must collect the information by methods that will assure action by the people involved. It is indeed unfortunate that the prevalent attitude about evaluation is that the real intent is to embarrass or to harass or to do even worse things to teachers and administrators. This fear or apprehension about evaluation is easily documented, and must be the highest priority concern of anyone who believes he will carry on an evaluation effort. The apprehension is indeed unfortunate because it may delay or stop good local evaluation work and thereby lead to the very thing that educators are most concerned about--evaluation imposed by outside agencies. The evidence for this eventuality is easy enough to see--consider the "national assessment" movement, performance contracts given to private agencies, and "voucher" education (a version of the G.I. Bill applied to public elementary and secondary education).

The best way to deal with this apprehension is to admit it, discuss it, and thereby put the concern into perspective. The procedure is simple. Administer a short check list anonymously, tabulate the results, and discuss them. Several types of these check lists are available.

But, there are other reasons why evaluation is not carried out very well. First, evaluation must answer the questions that people are really concerned about. There are procedures to focus evaluation on those concerns. Second, evaluation means measurement, but measurement in the social sciences is difficult. However, it is equally difficult to see how a teacher, a principal, or a college professor can regularly evaluate student performance and yet claim measurement is not possible in evaluating program effectiveness! In fact, cannot the question be raised that evaluation of student performance is a "cop-out" for educators? As long as we

can claim that each failure is the fault of the student and not in our materials, in our methods, or part of our educational system, we come out with a "clean slate." But do we? Perhaps the taxpayer and the legislator are on to our game, so that our defense won't work any longer. Evaluation requires measurement that is difficult, but let us not be hypocritical and say we can evaluate the other guy's performance but not our own! Any argument against evaluation can only be taken seriously when we give up handing out grades to students!

Third, evaluation is difficult because we have not allocated necessary resources to get the task done properly. Business and industry place a far larger percentage into the equivalent of "non-teaching" functions than we do in education.

In one way, however, the criticism about our evaluation efforts is misleading. We do make decisions every day about the lives of our students and our programs. These decisions are made on the basis of <u>some</u> evidence, which means we are practicing some type of evaluation. The proper criticism is not to say we do everything on hunch, myth, or bias, but to say that we do not expose sufficiently to public view and discussion the facts and information we do use. The credibility gap is not limited to national figures or national government. It exists right in the classroom, in relations between child and adult, between teacher and principal, and between educator and taxpayer.

The following criteria are suggested by which to judge any evaluation program that a local school district might undertake:

1. Is the person (or group) responsible for the evaluation effort sensitive about and responsive to the feelings people have about any evaluation effort?

Too often, evaluation is what we want to do to the other guy, but not to ourselves. The only way any evaluation effort will survive for any period of time is to deal openly and honestly with emotions that will be aroused, as surely as the sun sets, when we seek out judgments about our performances. For this reason the <u>human relation</u> skills of an evaluator are more important than his technical skills. He only needs to know enough about technical skill to call upon the right kind of competence when needed, if he lacks it himself. It is doubtful that he can as easily, if at all, call upon others to exercise the human relation skills.

2. Is the intent of the evaluation to provide immediate and useful feedback to all of the persons involved so that they can obtain answers to questions they are concerned about and thereby change their own performances?

This criterion focuses on the ultimate intent of evaluation. Supposedly, we do evaluation so that improvements can be made. There are two approaches that could be used. One approach uses force, "clout," political and even military power. This is at least one of the prime reasons why we emotionally reject evaluation by outside groups and powers. We view it as an attempt by the outsiders to make us do what they want us to. All the issues of freedom, political choice, and responsibility are involved. When applied by this means, it is a reasonable assumption that the true purpose of evaluation is lost in the larger issues.

The second approach uses the psychology implicit in the saw, "You can lead a horse to water, but you can't make him drink." We must present the issues of evaluation in ways that people willingly will collect information about their performances and adjust tried behaviors accordingly.

One adage that will not work is to say that a program is to be evaluated and not people. What program exists that at least one person or more does not have his ego tied up in it in some way. Vocational education? Reading? Science? Counseling and guidance? The adage either represents stupidity or hypocrisy. What is tolerable is to say that we all will hurt together.

3. Is at least one major kind of data being collected about the performance of each group involved in the evaluation effort?

The intent of Criterion 3 can be better understood by some illustrations. If the purpose of the evaluation effort is to improve the instruction of School X under the leadership of the principal, then the principal should collect evidence about his own performance and demonstrate to the teachers how he has used the results of the evaluation to improve his performance. If the school board desires to have individualized instruction evaluated (and does not intend to fire all of the staff associated with the program if the results are not up to expectation), then it ought to collect some information about its own performance, such as the trust the community has in the board to make decisions about vocational education.

4. Is the data being collected in a form useful to those making the decisions and changing their performances?

Evaluation is not research. While many of the techniques of research are useful in evaluation, research design cannot be substituted for evaluation design. This is especially true in the techniques of classifying, collecting, and analyzing data. Since literally hundreds of decisions are being made daily in every school that affect children, concerns about "5% level

of confidence" or standardized instruments must make way for "decision design," not research design. One way of looking at evaluation is to view it as a means to improve the decisions we must make anyway. While the researcher can use highly abstracted concepts such as I.Q., the evaluator must translate the I.Q. into behaviors we can expect of children with high or low ability test scores. We can find a "reading readiness index" but the teacher needs to know what specific materials five-year-old Susan or John can use.

5. Are all of the findings of the evaluation made available <u>only</u> to the people whose performances are involved, until they have had an opportunity to understand the findings and act upon them?

This criterion obviously will be controversial, at least to those primarily interested in "getting the goods" on a group of people. Even when the stated purpose is to evaluate a program, the psychological impact is to indict the people associated with the program if the findings appear damning.

The result is that the people associated with the program will spend their psychic energies in trying to de-fuse the evaluation rather than to make meaningful use of the findings.

This criterion does not mean that outsiders should never see the results or be shown that changes have occurred. Little else would increase the credibility gaps faster between educator and taxpayer than to hide the findings. Withholding the findings at best would only temporarily postpone the outside evaluation that otherwise is coming.

<u>But the role of the evaluator is clear</u>. <u>He is not</u> the person to publicly announce the findings. As soon as he does, he reduces or destroys any future effectiveness with the group. It is the responsibility of the group to decide how, when, and in what form to publish the results. The relationship between evaluator and the group being served is like that between lawyer and client. Any evaluator who refuses that role must perceive himself as shifting from counselor to prosecutor. If he wants the latter role, then that is his business, but he ethically must announce his role ahead of time. A school board will be faced with such choices on occasion, as in the decision on whether to renew the contract for a superintendent. If they do empower someone to collect evidence that might lead to job loss, then the ethics of evaluation require them to announce the intent prior to the collection of data, so that people will know what the consequences might be.

A Plan of Action

The evaluation so far carried out on the 45-15 Plan has been distinguished by these features:

1. Largely the collection of baseline data (costs, student achievement, community attitudes, teacher morale, etc.). Major answers are one to two years away or more.

2. Funded largely by outside agencies interested in questions not of the same priorities as the school board and district personnel.

3. Leaves unanswered major evaluation questions that are of most concern to citizens of Valley View School District, such as:

   -- Success of different kinds of students in the district.

   -- Extent and success of specific programs, such as individualized instruction.

The evaluation of individual students (so-called grades and report cards) focuses on the successes and failures of students, not the system that teaches them. As mentioned earlier, it is "safer" to keep the evaluation focused on the students. Hence, a "Plan of Action" must map out activities that will shift focus on ourselves--a painful thought, yes?

The following sequence of activities is recommended:

1. Give a "priority check list" to all teachers, principals, and others who might be interested in the evaluation.

2. Give an "attitude toward evaluation" scale to those who will be most involved.

3. Tabulate, summarize and return the results of the two instruments to personnel of schools involved. Results of each school are to be kept separated. Each school is to:

   a. Select three kinds of data to be selected, one each of learning products of students (other than data already available such as achievement tests), behaviors of teachers with selected children and support by principals given to teachers to develop materials and procedures for these children.

   b. Study instruments selected to see if any changes in items or procedures are to be made.

c. Discuss implications of the findings of the "attitude toward evaluation" instrument.

4. Select a committee of four (two teachers, one student, one administrator from school) to supervise collection of data.

5. Collect data.

6. Analyze data and prepare summaries separately for each school.

7. Meet with staff, using a full institute day to discuss results of findings, and to propose possible action.

8. Select one or more committees to prepare one or more changes in the school program in light of the evaluation findings.

9. Select one committee to direct preparation of a public version of the evaluation findings.

10. Convene staff at a second all-day institute to discuss the recommendation of the committees, vote on actions to be taken.

The "evaluator" would assist in schools by:

1. Meeting with principals to discuss proposed evaluation plan.

2. Preparing "priority check list."

3. Analyzing results of "priority check list" and "attitude toward evaluation" scale, preparing summaries and interpretation.

4. Meeting with principals to help plan details of institute days.

5. Preparing needed instruments.

6. Working with faculty on institute days as an observer-assistant.

7. Working with committee to give consultant help on use of instruments.

8. Preparing a report under the direction of the committees which are responsible for publication of findings.

The school board accepted the point of view in principle and instructed the administration to proceed with the procedures that might implement the approach.

C. A RESEARCH DESIGN

The following outline was given to the school district in order to make better use of available baseline data for research purposes. Admittedly, not all of the actions would serve immediate local interests, but most of the results could be fed back through local evaluation procedures.

1. When feasible, collect comparable data from one or two school districts in the Chicago Metropolitan area that are very similar in make-up. Three types of data that are important are costs, student achievement, and community support for schools. The data probably can be obtained with relative ease. The same instruments should be used when practical.

2. Repeat all local data collection at least once each year as a means of monitoring the changes occurring within the district. The data would include all types collected through this project.

3. Make all data available (subject to Valley View restrictions as judged necessary for the school board and the administrators) for additional analyses by outside groups or individuals.

4. Hold seminars for interested persons and institutions who can review the data, suggest improvements in procedures, and make interpretations and conclusions.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

A. INTRODUCTION

While post-test data is not yet available on the Valley View 45-15 Plan, the baseline information appears to warrant these conclusions:

1. One-third more classroom space can be made available immediately through the 45-15 Plan.

2. Immediate savings (up to 5% per pupil) can be gained under these conditions:

   a. Enrollment is rising rapidly;

   b. Debt retirement is high per pupil.

3. Educational benefits immediately accrue if overcrowding or double-shifting is prevented.

4. One or more unknown but unique elements account for the introduction of the 45-15 Plan as an innovation, because many other districts are facing similar problems of crowding. However, none yet have gone on a full-year operation as has Valley View. The hypothesis suggested for testing is that the explanation lies in the personalities of the school board members and administrators.

5. The community can be won over to the support of short vacations at four different times during the year as they learn how to use the time. Those people most strongly objecting are generally critical of the school system.

6. Student scheduling is the toughest administrative problem to solve. However, if a "systems" approach is used and a good organizer is responsible, it can be done in two or three months and on a budget of about one dollar per pupil. Two factors can ease the problem considerably:

   a. Use of individualized instruction;

   b. Schools with large enrollments.

7. Most teachers will take a year-long contract if given the opportunity to do so.

8. Evaluation that uses staff who are sensitive to human relations can bring trust for the evaluation effort.

9. Basic research objectives can be more easily reached if incorporated into "formative" evaluation. This means that the people involved must see "pay-off" from the evaluation activities.

10. Teachers are willing generally to try a year-round operation, especially if given the option on the length of their contract. However, they are quite skeptical of most of the claims made for year-round programs prior to any actual experience with it.

11. The move to a year-round operation wins strong support from economy-minded taxpayers and watch-dog groups. However, a majority of parents are more concerned about the educational outcomes of the program.

The above eleven succinct conclusions are largely self-explanatory. However, some comment would help on two of them. Student scheduling is made easier with non-graded programs because students can come and go if the instruction is truly individualized. Also, larger enrollments tend to reduce chance inbalances. On Number 8, human relations conscious evaluators, attention is called to the human relations skills that an evaluator must have, though researchers might be able to get by without them.

B. RECOMMENDATIONS FOR VALLEY VIEW

1. The school district should continue to collect and report monitoring data both as a service to itself and to the field.

2. A charge should be made by the district for all data supplied to groups or individuals as a means to recover partially the costs of data collection.

3. The experiences gained in developing and implementing the 45-15 Plan should be translated into a training kit for sale and distribution. This would be far more useful for implementing plans elsewhere than formal reports such as this one.

4. Funds should be sought from outside agencies for the purpose of continuing the evaluation because of the importance of the program to districts elsewhere.

C. RECOMMENDATIONS TO DISTRICTS CONTEMPLATING A STAGGERED, SPLIT-VACATION YEAR-ROUND SCHOOL OPERATION

1. Allow one year for planning.

2. Establish a position of a planning director, give him one year to do the planning, and provide a budget of three to five dollars per pupil.

3. Prepare a calendar early and have the school board adopt it early.

4. Involve the community in answering just one question. That question is, "What would you do and what would you recommend for us if the district increased classroom space by one-third?" All other questions should be answered by district personnel.

5. Discover the questions by different local groups that cannot be easily answered and establish an evaluation program which will answer them within practical limits.

6. Seek out the person with the strongest objections, listen to him, answer his questions sincerely and honestly, but proceed with the planning according to the temper of the most positive people.

7. Answer all questions by all people carefully and patiently, over, and over, and over.

8. Give teachers as much freedom as possible in selecting the length of their contracts.

9. Give each principal freedom to build any type of staff schedule he desires in his building.

10. Encourage use of non-graded or individualized instruction as a means to solve student scheduling problems and to advance the cause of better education.

11. Be prepared to do most of the hard work of planning but give all of the recognition to the teachers and principals when the program starts because they will do the hard work from then on.

The above recommendations are short and pointed. They obviously simplify what must be a complicated task. Yet, the important tasks that must be done do not make up a long list. Attention to the ideas in each of the recommendations will assure at least reasonable success.

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APPENDIX A

INSTRUMENTS USED IN STUDY

Questionnaire for Teachers

Questionnaire for Community People

Interview Protocol

Priority Concerns Check List

Feedback on Interviewers

FINAL PROFESSIONAL EVALUATION
Before the Grand Opening
of the 45-15 Plan

May 15, 1970

Dear Professional:

Our school district will soon embark on one of the most notable innovations in American education. We have talked a lot, planned in great detail, anticipated many problems, and, hopefully, will be ready with all of the answers.

However, we would like to have a comprehensive evaluation of all that we have done so far before the plan is actually underway. You can help by giving as rigorous a rating as possible of each feature of the 45-15 Plan and the planning activities.

Please give a rating to each item below according to the following scale:

1 = Heartily Agree
2 = Mildly Agree
3 = Don't know or mixed reactions
4 = Mildly Disagree
5 = Strongly Disagree

_____ 1. The length of my contract for next year is just right. (If dissatisfied, is it too long _____ or too short _____?)

_____ 2. The track(s) I will be working with is(are) the one(s) I wanted.

_____ 3. My salary per month for next year (i.e., ignore the length of your contract) is excellent compared to salaries of surrounding districts.

_____ 4. Cooperative teaching teams are a fine arrangement. What is the prime reason for giving the rating that you do? _____
_____
_____

_____ 5. The track your own children are on is the best for your family (if you have children in school).

_____ 6. Your principal's understanding of the 45-15 Plan is good.

_____ 7. Your principal's attitude toward the 45-15 Plan is good.

_____ 8. Your own attitude toward the 45-15 Plan is good.

_____ 9. The planning done by the administrative staff <u>other</u> than your principal has been good.

_____ 10. Teachers who will be working <u>more</u> than the customary 184 days within a twelve-month period will become tired and worn out.

_____ 11. Students will do better on yearly achievement tests because of several short vacations instead of one long summer vacation.

_____ 12. Families will get used to several short vacations and most will give mild or strong support after one year.

_____ 13. The families in Track A will be the most negative toward the 45-15 Plan because they have to start first.

_____ 14. A completely individualized instruction program is much easier under the 45-15 Plan. (Ignore special education classes.)

_____ 15. If the 45-15 Plan lasts for five years, then a higher proportion of men teachers will be employed in the district.

_____ 16. Elementary education should have more men teachers than presently.

_____ 17. It will be much harder to teach under the 45-15 Plan. Please list the reasons for your rating.

a. _____
_____

b. _____
_____

c. _____
_____

_____ 18. Other community agencies and programs, such as park and recreation, church, and summer camp, will quickly adjust with little complaint to the 45-15 Plan.

_____ 19. Absenteeism will be much higher during the summer months.

_____ 20. Students will become more positive in attitudes toward school.

_____ 21. Building maintenance and major repair costs <u>per month</u> per building will go up.

_____22. Some families will move out of the school district because of the 45-15 Plan.

_____23. Some families will move into the school distr ct because of the 45-15 Plan.

_____24. Half or more of the children will return to the schools during their vacations at least once a week if they are allowed to use libraries, participate in extra-curricular activities, and join field trips.

_____25. Inservice training is needed if the 45-15 Plan is to work well.

_____26. The 45-15 Plan will still be in operation five years from now.

_____27. Parental attitudes, on the average, will improve toward the school district under the 45-15 Plan.

_____28. Teacher turnover will be reduced.

_____29. Individualized instruction will be used by most or all teachers, grades K-6, in at least two subjects by 1974 in District #96.

_____30. There will be greater variation in the sizes of classes under the 45-15 Plan.

_____31. Administrative costs per child will go up under the 45-15 Plan as compared to similar districts operating under a traditional nine-month schedule.

_____32. Student-teacher-parent conferences will increase under the 45-15 Plan.

_____33. Costs of instructional materials and equipment per child per year will increase.

_____34. Building costs (debt retirement) per child will go down under the 45-15 Plan.

_____35. Teachers will make less use of cumulative folders under the 45-15 Plan.

_____36. Students will do less homework under the 45-15 Plan.

_____37. District #96 will gain national attention in the next five years.

_____38. Teacher effectiveness will decrease during the next five years under the 45-15 Plan.

_____39. Trust between teachers and students in District #96 will increase in the next two years.

_____40. Trust between teachers and administrators in District #96 will increase in the next two years.

_____41. Taxpayers <u>without</u> children will feel more positive toward District #96 in the next five years.

_____42. All in all, the 45-15 Plan is the most exciting educational innovation I have ever participated in.

43. I teach or work at grade level(s) _____.

44. I am _____ am not _____ a member of a cooperative team.

45. I am a teacher _____, administrator _____, para-professional or aide _____, other professional _____.

46. I am a man _____ woman _____.

47. My age is: 20-24 _____ 25-29 _____ 30-34 _____
35-39 _____ 40-44 _____ 45-49 _____
50+ _____

48. I predict that I will _____, will not _____ be working in District #96 two years from now.

QUESTIONNAIRE FOR COMMUNITY PEOPLE

Summer, 1970

Dear Parents:

Based on your knowledge and the experiences you have had so far with the Valley View School District, please rate the following features of the school system.

5 = Excellent
4 = Good
3 = Average
2 = Poor
1 = Very poor
0 = No opinion, do not know

Rating

_____ 1. Bus schedules

_____ 2. Teachers in the elementary schools

_____ 3. Teachers in the Junior High School

_____ 4. Instructional materials

_____ 5. Elementary buildings

_____ 6. Building of West View Junior High School

_____ 7. School principals

_____ 8. Extra services such as library and special education classes

_____ 9. Efficient use of tax money

_____ 10. Information received about the Valley View 45-15 Plan

_____ 11. Worth of the Valley View 45-15 Plan

12. Will you have children enrolled in either the Valley View elementary schools or the Junior High School next year?

_____ Yes _____ No

13. Will you change your usual vacation plans because of the 45-15 Plan?

_____ Yes _____ No _____ Don't know

If "Yes," how? _____

_____

14. Can you think of anything that would change your present opinion about the 45-15 Plan?

_____ Yes _____ No

If "Yes," what might it be? _____

_____

_____

15. Do any members of your family strongly <u>disagree</u> with you about the worth of the 45-15 Plan?

_____ Yes _____ No _____ Don't know

16. What do you think were the <u>major</u> reasons for the School Board adopting the 45-15 Plan? (Check one or more.)

_____ (1) Save building costs

_____ (2) Save instructional costs

_____ (3) Save administrative costs

_____ (4) Save heating costs

_____ (5) Improve instruction

_____ (6) Raise yearly salaries of teachers who will work twelve months

_____ (7) Bring more men teachers into the school district

_____ (8) Help families to have vacations in all seasons of the year

_____ (9) Over-crowded classrooms

_____ (10) Other: _____

_____

17. Would you (if the state law were to allow it) vote for higher taxes to avoid the 45-15 Plan?

_____ Yes _____ No _____ Don't know

18. Do you believe that the 45-15 Plan will actually save money for the district?

_____ Yes _____ No _____ Don't know

19. Are you in favor of more men teachers in the elementary schools?

_____ Yes _____ No _____ Don't know

20. If evaluation shows that students learn more under the 45-15 Plan but no money is saved, would you then support the Plan?

_____ Yes _____ No _____ Don't know

21. If the 45-15 Plan were to save 5% on educational costs but the students were not to learn any more than under the traditional school year, would you then support the Plan?

_____ Yes _____ No _____ Don't know

22. Are you aware of any special problems your children have in school now?

_____ Yes _____ No _____ Have no children in school now

23. What occupation(s) do you hope your oldest child (whether or not he or she is in school) will go into? _____

_____

24. Is there another person (not an educator) in the community whom you trust and who knows of the disadvantages as well as the advantages of the 45-15 Plan (one who is well-informed)?

_____ Yes _____ No

If you have no objection, would you give the person's name and address so that he could be asked if he would grant an interview about the 45-15 Plan:

_____
(Name) (Address)

_____
(Telephone number, if known)

25. If your answer was "Yes" on Question 24, have you talked personally to this person? _____ Yes _____ No

26. How many years have you lived in the community? _____

2

27. Who are you?

_____ Mother
_____ Father
_____ Both Mother and Father
_____ Other _____

28. Would you be willing to be interviewed by an outside interviewer (someone not living in the community but paid for by the local school district) every six months about your ratings of the 45-15 Plan and your reasons for the ratings?

_____ Yes _____ No

If "Yes," then please give your name and address below:

_____
(Name) (Address)

_____
(Telephone)

COMMENTS: _____

_____

_____

_____

INTERVIEW PROTOCOL

1. Ask permission to tape-record. If refused, put down nearly verbatim responses but not entirely so. Do a minimum of editing. Tell them, if asked, that only people at the university under the personal direction of the project director will listen to the tape. No one in the district will know who said what. We will prepare summaries only for the school staff to use.

2. DO NOT look at the questionnaires before talking to the parents. You should not know whether they came out of the high or low group, though you may guess correctly after talking to them.

3. Use the questions as leading questions. Seek all possible elaboration when they in any way indicate they have more to say.

4. Use a separate tape cartridge for each interview, putting the code number only on the cartridge and date of interview.

5. Each of the questions must be asked even if it seems like it has already been asked.

6. Interview both parents together when possible, even if only one parent's name is on the test. However, don't postpone an interview because one parent is absent. Do tell them when calling that you would like to have both parents there if convenient for them. Record divergent or apparently irrelevant answers when given.

1. What group are you in? _____ A B C D

2. Will(do) you have any children in school this coming year?

_____ Yes _____ No

If so, what are their names, ages, and schools they are attending?

Name	Age	School

3. Please describe your vacations for the family during the last two years (length, frequency, at home or away). How long, when, where, who went, what kinds of activities, etc. This question is vital for the survey. (Get as specific information as possible.)

4. Can you say now what changes you think you must make in your vacation plans because of the 45-15 Plan?

5. What overall rating would you give to the Valley View School District (not the high school district) -- ignoring the 45-15 Plan? /_____/_____/_____/_____/_____/
(Excellent) (Good) (Average) (Poor) (Very poor)

6. Out of this list (hand them a card with items on it). pick out the two items you would give the lowest rating on.

7. Please pick the two best items.

_____

_____

8. Do you know any of the school board members personally?

_____ Yes _____ No

9. Have you ever talked to any of the school board members about the 45-15 Plan?

_____ Yes _____ No

If "No," would you like to? _____ If "Yes," how long ago?

_____

10. Have you ever talked to a principal or a teacher about the 45-15 Plan?

_____ Yes _____ No

If "No," would you like to? _____ If " Yes," how long ago?

_____

Did you attend any of the meetings about the 45-15 Plan? _____

11. Have you ever talked to any of your neighbors about the 45-15 Plan?

_____ Yes _____ No

If "Yes," has this helped you form an opinion? _____

In what way? _____

_____

12. Do you read most or all of the news articles on the 45-15 Plan?

_____ Yes _____ No

13. On the reverse side of the card is a list of common questions parents and taxpayers have asked about the 45-15 Plan. Are any of those questions still unanswered in your mind?

_____

_____

_____

_____

14. From what you now know about the 45-15 Plan, what is your opinion of the Plan?

/_____/_____/_____/_____/_____/

(Excellent) (Good) (Average) (Poor) (Very poor)

15. Do you believe that the 45-15 Plan will actually save money for the district?

Why? _____

_____

_____

16. If achievement tests show that students learn more under the 45-15 Plan, but no money is saved, would you then support the Plan?

_____

_____

17. If the 45-15 Plan were to save 5% on total costs to the school district but achievement tests showed that the students learned the same amount as under the traditional school year, would you then support the Plan?

_____

_____

_____

18. Do your children have any special problems in school now? (Ask even if all are in parochial school.) _____

Is the school district doing anything to help your children with these problems? _____

_____

_____

19. What is the best thing you can think of that the schools could do for (your*) children?

* Omit word if person has no children of his own.

_____

_____

_____

Are they doing it? _____

20. Should schools help all children to get better jobs?

_____

_____

_____

21. Do you want any of your children to go to college? _____

If "Yes," do you think the Valley View School District has a good program for this purpose? _____

22. How long have you lived in this community? _____

23. Did the reputation of the schools in any way influence your decision to come? _____

24. Are there any reasons you can think of why you might leave this area in the next two years? _____

25. Has (will) the 45-15 Plan caused(cause) any change in your household budget for items such as clothing, spending money, baby sitting, or food? _____

26. Will the 45-15 Plan change the times that friends and relatives will visit your family? _____ Yes _____ No

If "Yes," in what way? _____

27. Do you know personally of any family who has moved into the district or moved out because of the 45-15 Plan?

_____ Yes _____ No

28. Do you know personally of any family who will place their children into or take them out of parochial schools because of the 45-15 Plan?

_____ Yes _____ No

29. Do you have any other comments about the school district or the 45-15 Plan?

_____
_____
_____
_____
_____
_____

30. Here is a rating sheet for you to tell the University of Illinois whether I did a good job in my interview. If you have no objections, would you fill in the rating sheet after I leave and drop it in the mail. [See Page 67.]

What are the best and worst features of the Valley View District #96?

(Check two of each):

1. Teaching of arithmetic
2. Textbooks for arithmetic
3. Teaching of reading
4. Books for pupils to read
5. Teaching of science
6. Materials for science instruction
7. Teaching of social studies, including history
8. Materials for social studies instruction
9. Special education classes
10. Teachers for elementary classes
11. Teachers for the Junior High School classes
12. Music instruction
13. Art instruction
14. Recreational programs
15. Libraries
16. Bus schedule for last year
17. Bus schedule for next year
18. School(s) your child(ren) was(were) assigned to last year
19. School(s) your child(ren) is(are) assigned to this year just underway
20. Group (A, B. C, or D) your family has been assigned to
21. School principals
22. Policies of school board on how tax money is used
23. Amount of taxes paid to the school district
24. Information received from school officials
25. The Valley View 45-15 Plan
26. Other

Typical Questions Asked by Families
About the 45-15 Plan

1. Can we change the group we are assigned to? If so, what is the procedure.

2. Why must some students be assigned to schools not nearest to their homes?

3. What happens if children go on vacations with their families when they should be in school?

4. When will the air conditioning be brought to a state of satisfaction?

5. Will teaching for twelve months a year be tiring for the teachers?

6. Will the children be taught the same materials as during the traditional year?

7. How much will the children learn?

8. How much money will be saved for the district on one year?

9. What will happen to children when they move to another district or enter high school?

10. What are we to do during each of the fifteen-day vacations?

CHECK LIST OF PRIORITY CONCERNS

The Valley View 45-15 Plan will soon go into operation. Many kinds of changes could happen. However, it will not be possible to find out about every possible change. Time and resources will be too limited.

Below are listed many kinds of information that could be collected about changes. Please go through the list and circle each item that you believe is essential information to collect--so essential that some local district funds ought to be used to obtain the information, if no other way can be found to carry out the evaluation.

CHANGES IN:

1. Number, length, and types of vacations that families take each year.
2. Average salary paid to teachers and others for 180 days of employment as compared to other schools in the area.
3. Average number of days each teacher works during one calendar year.
4. Recreation and amusement programs in the community.
5. Absenteeism, truancy, and juvenile delinquency.
6. Behavior of teachers (e.g., irritableness, emotional outbursts, fairness, etc.), based on judgments of students.
7. Attitudes of students toward school, based on self-reports (e.g., questionnaires).
8. Costs of building maintenance and major repairs.
9. Community church programs.
10. Kinds of families moving into and out of the community.
11. Kinds of work and amount of time worked by mothers.
12. Cost per child for teachers and other personnel.
13. Loneliness felt by children during vacation periods.
14. Kinds and amounts of further training chosen by teachers and administrators.
15. Friends chosen by students.

16. Cost of school transportation and air conditioning.
17. What students do during vacation periods.
18. Summer-month attitudes of students and teachers, including amounts of absenteeism.
19. Industries attracted to the school district.
20. Attitudes of parents toward the schools, based on interviews.
21. Student achievement tests.
22. Changes in teacher characteristics, such as sex, age, and background.
23. Parent involvement in school activities.
24. Teacher demands as expressed in teacher-school board negotiations.
25. Costs of building construction.
26. New instructional techniques used by teachers.
27. Trust of parents in the work of the teachers.
28. Career interests of students.
29. Willingness of taxpayers to provide financial support to the schools.
30. Cost of total program (per student) as compared to state-wide figures for various kinds of districts.
31. Size of classes, and variations in size.
32. Characteristics of the school administrators and school board members (length of service, sex, occupation, etc.).
33. Costs of teacher substitutes, classroom aides, and other supportive personnel services.
34. Student-teacher-parent conferences.
35. Student sensitivity to future social problems (e.g., pollution, population explosion, etc.) and commitment to solve them.
36. Costs of instructional materials and equipment.
37. Friendships among children and among families.
38. Use of cumulative folders and other information on students by teachers and others.
39. Achievement test scores by drop-out-prone and highly gifted children.

40. Homework done by students.

41. Tasks assumed by children in the home.

42. Student creativeness in solving problems.

43. Student social maturity.

44. Jobs and earnings of teachers outside of their teaching job in the district.

45. Personnel policies in the district.

46. Perceptions of the district by the state education department, universities, and other school districts.

47. Student make-up of classes (sex, age, test scores, etc.).

48. Teacher effectiveness based on outside observers.

49. Trust between teachers and students.

50. Trust between teachers and administrators.

51. Patterns of friendship among the teachers.

52. Actual functions performed by teachers and administrators.

53. Kinds of criticisms that taxpayers without children make of the school district.

54. Kinds of criticisms that parents make of the school district.

ARE THERE OTHER KINDS OF INFORMATION YOU THINK IMPORTANT TO COLLECT?

FEEDBACK ON INTERVIEWERS

Summer, 1970

Dear Parent and/or Taxpayer:

Thank you most sincerely for helping out with our interview survey. You are providing a very valuable service to the school district.

You can help us even further by evaluating the effectiveness of our interviewer. If he is making any mistakes, you can help him correct them. If he is doing a fine job, then he will be happy to hear that too.

A self-addressed, stamped envelope is provided for your convenience.

Sincerely,

William M. Rogge
Project Director
Evaluation of the 45-15 Plan

Enclosure

July _____, 1970

Dear Professor Rogge:

We were interviewed by Mr. _____.
Here is our rating of his work:

1. Was he on time with his appointment? _____

2. Did he answer all of your questions? _____
If not, what did he fail to answer?

_____

_____

3. Was he friendly and polite? _____

4. Did he say or do anything that made you uncomfortable?

_____

_____

_____

5. Do you trust him? _____

6. Did he ask any questions that you thought inappropriate?

_____

7. Are there any questions he should have asked but did not?

_____

8. Would you like to have him at your next interview session (which probably will be early in 1971)? _____

9. Comments: _____

_____

_____

_____

_____

APPENDIX B

THE VALLEY VIEW 45-15
CONTINUOUS SCHOOL YEAR PLAN

Valley View District #96
Research and Development Office
Dalhart Avenue
Lockport, Illinois 60441
(185) 838-7981

The Valley View 45-15 Continuous School Year Plan is a method of assigning pupils, building facilities, and staff members. By more efficient use of the physical plant, by a more extensive use of the personnel, and by a more equal distribution of pupil class attendance throughout the year, the school district anticipates a savings in building construction costs, a longer working year for some certified and non-certified employees (with corresponding increases in income), and quality education for the student body.

The Plan is educationally sound, financially desirable, and legally possible. This Plan was developed in District #96 and should not be confused with other scheduling systems.

1. Saturdays and Sundays, all Illinois legal holidays, a week at Christmas, a week at Easter, and a period of five to nine class days in July (as an adjusting period) are designated as school closing times. A five-year calendar has been prepared to insure that the pupil schedules are in logical segments. When classes are not in session, however, the buildings could be open for maintenance, athletic events, community activities, and library service. All provisions of the Illinois "Monday Holiday Bill" are observed.

2. All District #96 pupils are placed in one of four groups (A, B, C, or D), according to the small neighborhood in which they live. Unless the parents request differently, all children in the same family are placed on the same attendance schedule, even though the children may be at different grade levels or at different buildings. The four groups always stay in the same order of rotation.

Enrollment has increased at an exceptionally rapid rate and will continue to do so. Electronic data-processing facilities are necessary to the scheduling process.

3. On June 24, 1970, the teachers and staff members for Group A began a four-day Teacher Institute. On June 30, 1970, the pupils in Group A began classes. These pupils attended school for 45 class days then had a fifteen-class day vacation. Four cycles of attendance such as this gives the pupil 180 class days per school year and per calendar year.

4. Group B staff members had a four-day institute immediately prior to the beginning of classes for Group B. Group B pupils began classes on July 21, 1970, which was fifteen class days after Group A began.

5. Group C staff members had a four-day institute after which Group C pupils began classes on August 11, 1970. At this time, three of the four groups of pupils were in school and one group was on vacation.

6. After pupils in Group A finished 45 class days of schooling and began a fifteen-class day vacation, the pupils in Group D began classes utilizing the classrooms and (in some cases) the teachers that were used by the Group A pupils. Group A pupils returned to replace Group B pupils; Group B pupils replaced Group C pupils; Group C pupils replaced Group D pupils, etc.

7. The families in the community were scheduled first. The teachers and classrooms were scheduled to match the pupils for grade level and department (in the junior high).

8. Bus service, building administrators, library and resource center staff members, cafeteria workers, and custodial employees were scheduled as required.

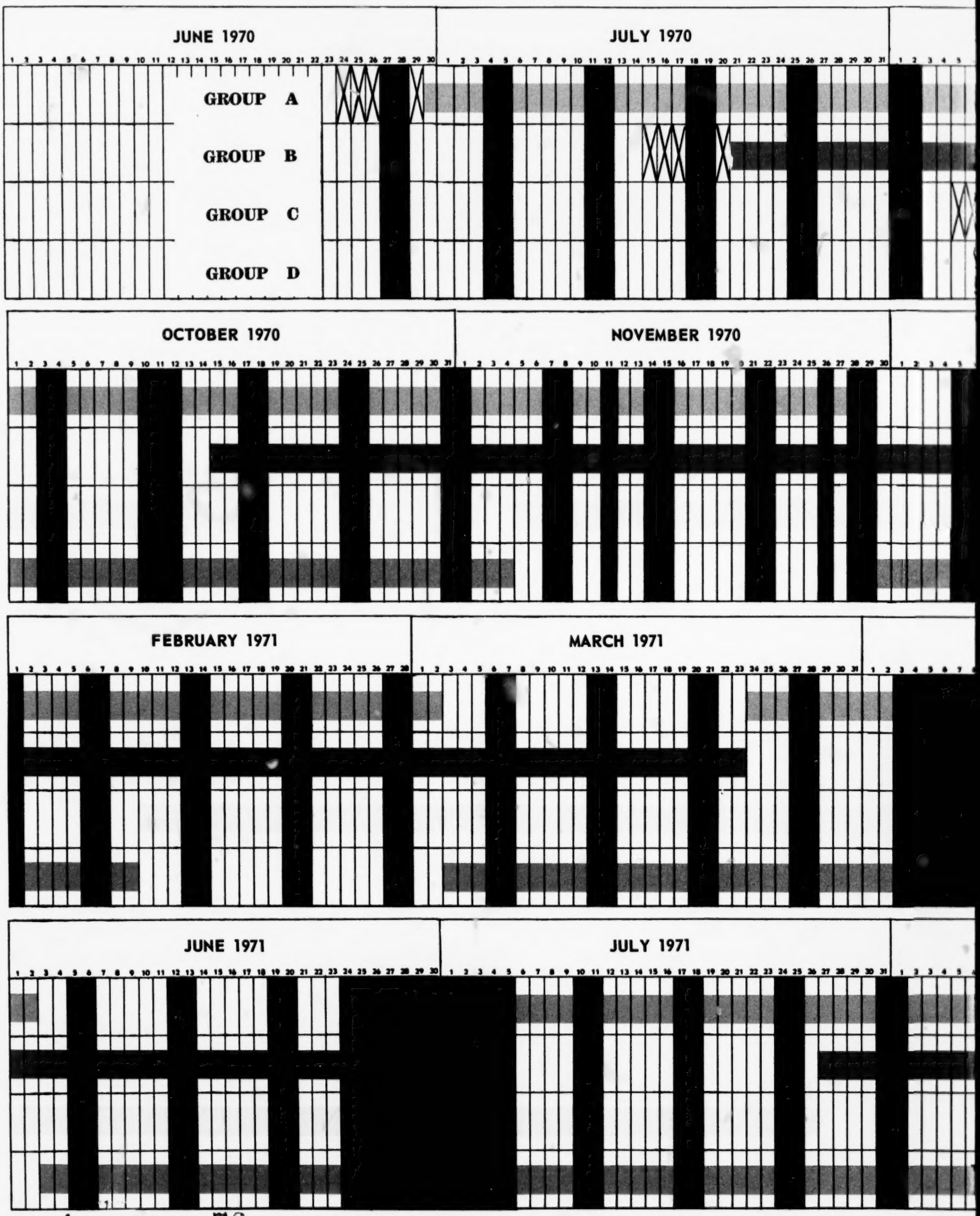
   Provision was made for special education pupils, pupils who transfer into District #96, and pupils who may be retained or advanced. Kindergarten classes are provided on a two-shift-per-day schedule.

   Provisions have been made for emergency school closing days and teacher institute days.

9. This scheduling system was designed to provide District #96 pupils with quality education, full school days (except for kindergarten pupils), and 180 class days per year. The 45-15 schedule is not a device for increasing class days of instruction.

10. So far the use of this Plan has resulted in saving the construction costs of sixty fully-equipped classrooms for District #96. New buildings and additions will also be scheduled under the 45-15 Plan.

Copyright Valley View District #96
September, 1970


JUNE 1970
JULY 1970
GROUP A
GROUP B
GROUP C
GROUP D
OCTOBER 1970
NOVEMBER 1970
FEBRUARY 1971
MARCH 1971
JUNE 1971
JULY 1971

VALLEY VIEW

45-15 PLAN 77

Developed By School District No. 96
Lockport, Illinois

A

B

School Closing Days

C

D

Proposed Institutes

© Valley View District No. 96 — 1969

APPENDIX C

ILLINOIS LEGISLATION AND STATE OFFICE GUIDELINES AFFECTING YEAR-ROUND SCHOOL OPERATIONS

State of Illinois
Office of the Superintendent of Public Instruction
302 State Office Building
Springfield, Illinois 62706

October 7, 1969

Ray Page
Superintendent

Method of Distributing General State Aid
to Districts on an Approved
Twelve Month Calendar

House Bill 1525 was passed by the Seventy-Sixth General Assembly and was signed into law by the Governor on August 18, 1969. The law authorizes the Superintendent of Public Instruction to determine the General State Aid apportionment to districts that operate on an approved twelve month calendar in accordance with Section 18.8 of The School Code of Illinois as near as may be applicable. The following procedure will be followed for a school district which operates on an approved twelve month calendar during 1970-1971.

I. General State Aid payments in 1970-1971 will be computed on the following basis:

   1. The best six months' average daily attendance for the 1969-1970 school year

   2. The 1968 assessed valuation of the school district

II. For the 1970-1971 school year, attendance shall be maintained for each tract. In order to compute the average daily attendance for a month, the total days of attendance shall be divided by the number of days school was in session for that month. The average daily attendance for the best six months of the fiscal year will be the initial basis for the 1970-1971 State Aid computation. Inasmuch as approximately seventy-five percent of the pupils are enrolled at any time, the best six months' average daily attendance will be multiplied by four and divided by three to determine the district's weighted best six months of average daily attendance. The average daily attendance for pupils in grades 9-12 will be multiplied by 1.25 in the State Aid calculation.

III. General State Aid will be distributed to approved school districts in the following manner:

1. The first General State Aid payment may be vouchered to the State Auditor immediately following the final approval of the Common School Fund appropriation in an amount equal to approximately one-sixth of the district's General State Aid Claim entitlement for 1970-1971.

2. Beginning September 1970, payments will be made to approved districts in the same manner as General State Aid payments are made to all districts in the State of Illinois; these payments shall reflect any prior reimbursement.

A bill was introduced on April 22, 1970, into the Illinois State Senate by Senator Bilbert to amend Chapter 122, Paragraphs 10-19.1 and 10-20.12 of the school code to allow for a full school year for one or more schools in a district. It was signed into law by Governor Ogilvie on June 29, 1970, the day before the school began the 45-15 Plan. The legislation read:

> Any school district may, by resolution of its board, operate one or more schools within the district on a full year school plan approved by the Superintendent of Public Instruction. Any board which operates under this Section shall devise a plan so that a student's required attendance in school shall be for a minimum term of 180 days of actual attendance, including not more than four institute days, during a twelve-month period, but shall not exceed 185 days. Under such plan, no teacher shall be required to teach more than 185 days. A calendar of 180 days may be established with the approval of the Superintendent of Public Instruction.

APPENDIX D

Opinions and Attitudes of Professional Staff Toward 45-15 Plan as of June 9, 1970

Overview

Detailed Analysis of
161 Completed Questionnaires

Factor Analysis of Questionnaire

Study of Sub-sample Differences

OVERVIEW

On May 15, 1970, the entire professional staff of District #96 was asked to complete a questionnaire titled, "Final Professional Evaluation." A total of 240 questionnaires were returned. The staff was asked to respond to forty-two items by indicating whether they: (1) "Heartily Agree," (2) "Mildly Agree," (3) "Don't know or mixed reactions," (4) "Mildly Disagree," (5) "Strongly Disagree." After each item, the staff member was to respond by marking the number which reflected his feelings.

All staff members were told that this would be the final comprehensive evaluation prior to the June 30 opening and were asked to give as rigorous a rating as possible to the items presented. Seventy-nine incomplete questionnaires, consisting of twenty men and fifty-nine women, were analyzed separately to see if significance differences existed. The differences were so minor, the two groups were combined for much of the analysis.

Presented below in Table 1 is a summary of the total number of responses to each question by rating categories. This table shows the results of 161 completed questionnaires. (See Appendix A for instrument.)

Table 1

Summary of Answers on Completed Evaluations

Question Number	RATINGS									
	Heartily Agree		Mildly Agree		Don't Know or Mixed Reactions		Mildly Disagree		Strongly Disagree	
	n	%	n	%	n	%	n	%	n	%
1	103	64.0	21	13.0	22	13.7	5	3.1	10	6.2
2	100	62.1	29	18.0	17	10.5	6	3.7	9	5.6
3	10	6.2	21	13.0	43	26.7	40	24.8	47	29.2
4	32	19.9	25	15.5	82	50.9	17	10.5	5	3.1
5*	3	1.9	7	4.3	17	10.5	4	2.5		
6	69	42.8	56	34.8	31	19.3	4	2.5	1	0.6
7	94	58.4	41	25.5	23	14.3	2	1.2	1	0.6
8	63	39.1	45	27.9	41	25.5	6	3.7	6	3.7
9	40	24.8	49	30.4	43	26.7	22	13.7	7	4.3
10	33	20.5	14	8.7	79	49.0	23	14.3	12	7.4
11	21	13.0	49	30.4	82	50.9	6	3.7	3	1.9

* Only 31 persons answered this question as many of the faculty either did not have children or did not live in the Valley View District.

Table 1 (continued)
Summary of Answers on Completed Evaluations

Question Number	RATINGS									
	Heartily Agree		Mildly Agree		Don't Know or Mixed Reactions		Mildly Disagree		Strongly Disagree	
	n	%	n	%	n	%	n	%	n	%
12	17	10.5	46	28.6	74	45.9	18	11.1	6	3.7
13	27	16.8	49	30.4	59	36.6	18	11.1	8	5.0
14	10	6.2	31	19.3	76	43.5	31	19.3	13	8.1
15	30	18.6	61	37.9	50	31.1	15	9.3	5	3.1
16	56	34.8	47	29.2	30	18.6	17	10.5	11	6.8
17	15	9.3	37	23.0	55	34.2	43	26.7	11	6.8
18	15	9.3	31	19.3	71	44.1	34	21.1	10	6.2
19	45	27.9	46	28.6	46	28.6	20	12.4	4	2.5
20	10	6.2	22	13.7	98	60.8	27	16.8	4	2.5
21	27	16.8	44	27.3	62	38.5	22	13.7	6	3.7
22	39	24.2	61	37.9	44	27.3	14	8.7	3	1.9
23	13	8.1	31	19.3	67	41.6	34	21.1	16	9.9
24	18	11.1	59	36.6	40	24.8	30	18.6	14	8.7
25	70	43.5	41	25.5	30	18.6	17	10.5	3	1.9
26	43	26.7	36	22.4	63	39.1	15	9.3	4	2.5
27	17	10.5	44	27.3	85	52.8	13	8.1	2	1.2
28	20	12.4	42	26.1	62	38.5	28	17.4	9	5.6
29	24	14.9	41	25.5	69	42.8	18	11.1	9	5.6
30	28	17.4	41	25.5	66	41.0	19	11.8	7	4.3
31	17	10.5	39	24.2	73	45.3	26	16.1	6	3.7
32	21	13.0	33	20.5	76	47.2	27	16.8	4	2.5
33	18	11.1	37	23.0	70	43.5	28	17.4	8	5.0
34	20	12.4	39	24.2	88	54.6	11	6.8	3	1.9
35	8	5.0	10	6.2	62	38.5	61	37.9	20	12.4
36	14	8.7	17	10.5	77	47.8	40	24.8	13	8.1
37	78	48.4	55	34.2	22	13.7	2	1.2	4	2.5
38	6	3.7	15	9.3	80	49.7	31	19.3	29	18.0
39	12	7.4	30	18.6	100	62.1	13	8.1	6	3.7
40	7	4.3	34	21.1	90	55.9	22	13.7	8	5.0
41	17	10.5	40	24.8	79	49.0	15	9.3	10	6.2
42	56	34.8	44	27.3	44	27.3	11	6.8	6	3.7

DETAILED ANALYSIS OF 161 COMPLETED QUESTIONNAIRES

Each of the original forty-two questions has been placed into one of the following eleven separate groupings:

a. General View of 45-15 Plan
b. Student Success
c. Teacher Success
d. Innovations
e. Intra-School Relations
f. Attitudes of Lay Citizens
g. Attitudes of Professional Staff
h. Professional Contracts
i. Costs
j. Tooling Up (Planning, Inservice, Professional Understandings)

a. <u>General View of 45-15 Plan</u>:

Item:

26. The 45-15 Plan will still be in operation five years from now. *

    (26.7, 22.4, 39.1, 9.3, 2.5)

37. District #96 will gain national attention in the next five years.

    (48.4, 34.2, 13.7, 1.2, 2.5)

42. All in all, the 45-15 Plan is the most exciting educational innovation I have ever participated in.

    (34.8, 27.3, 27.3, 6.8, 3.7)

Almost one-half of the respondents felt the 45-15 Plan would be in operation for at least five years, over four-fifths predicted that in five years the Plan would gain national attention, and almost two-thirds of the staff stated that the 45-15 Plan was the most exciting educational innovation in which they had ever participated. The percentage scores in disagreement with these issues are extremely low when compared with the evaluations of other questions.

* The five percentage figures from Table 1 are given in parentheses.

b. Student Success:

11. Students will do better on yearly achievement tests because of several short vacations instead of one long summer vacation.

(13.0, 30.4, 50.9, 3.7, 1.9)

19. Absenteeism will be much higher during the summer months.

(27.9, 28.6, 28.6, 12.4, 2.5)

20. Students will become more positive in attitudes toward school.

(6.2, 13.7, 60.8, 16.8, 2.5)

24. Half or more of the children will return to the school during their vacations at least once a week if they are allowed to use libraries, participate in extra-curricular activities, and join field trips.

(11.1, 36.6, 24.8, 18.6, 8.7)

36. Students will do less homework under the 45-15 Plan.

(8.7, 10.5, 47.8, 24.8, 8.1)

There was a considerable reluctance to make decisive statements about predicted student success by the respondents. Over 43% did feel that positive gains could be expected in student achievement. Over one-half of the respondents thought that absenteeism would be much higher during the summer months. Almost half the staff did predict that students would return to school during vacations if given the opportunity. Relatively few would respond strongly either way to the statement that "students will do less homework."

c. Teacher Success:

10. Teachers who will be working more than the customary 184 days within a twelve-month period will become tired and worn out.

(20.5, 8.7, 49.0, 14.3, 7.4)

15. If the 45-15 Plan lasts for five years, then a higher proportion of men teachers will be employed in the district.

(18.6, 37.9, 31.1, 9.3, 3.1)

17. It will be much harder to teach under the 45-15 Plan.

(9.3, 23.0, 34.2, 26.7, 6.8)

28. Teacher turnover will be reduced.

(12.4, 26.1, 38.5, 17.4, 5.6)

c. Teacher Success (continued)

38. Teacher effectiveness will decrease during the next five years under the 45-15 Plan.

(3.7, 9.3, 49.7, 19.3, 18.0)

The responses indicate a great deal of uncertainty by the staff about what the outcomes of the 45-15 Plan as far as teachers are concerned. Nearly 30% thought teachers would become tired and worn out if they taught more than the customary 184 days but nearly 22% disagreed. There was not agreement on how hard it would be to teach or on teacher turnover. Closest agreement (56.5%) was on the prediction of more men teachers eventually being employed as a result of the 45-15 Plan.

d. Innovations:

4. Cooperative teaching teams are a fine arrangement.

(19.9, 15.5, 50.9, 10.5, 3.1)

14. A completely individualized instruction program is much easier under the 45-15 Plan. (Ignore special education classes.)

(6.2, 19.3, 43.5, 19.3, 8.1)

29. Individualized instruction will be used by most or all teachers, grades K-6, in at least two subjects by 1974 in District #96.

(14.9, 25.5, 42.8, 11.1, 5.6)

While over half of the respondents failed to commit themselves on cooperative teaching (not yet tried out), over one-third did agree with the statement that "cooperative teaching teams are a fine arrangement." One-fourth disagreed and one-fourth agreed that individualized instruction would be easier under the 45-15 Plan. More teachers (40.4%) believed individualized instruction would be used by most or all teachers in District #96 by 1974, though many (17.7%, disagreed with that too.

e. Intra-School Relations:

32. Student-teacher-parent conferences will increase under the 45-15 Plan.

(13.0, 20.5, 47.2, 16.8, 2.5)

39. Trust between teachers and students in District #96 will increase in the next two years.

(7.4, 18.6, 62.1, 8.1, 3.7)

40. Trust between teachers and administrators in District #96 will increase in the next two years.

(4.3, 21.1, 55.9, 13.7, 5.0)

e. Intra-School Relations (continued)

Half or more of the staff did not believe that intra-school relations would be affected by the 45-15 Plan. The remaining persons did not agree, though they tended to be more positive than negative. The number who were pessimistic was still large enough (19.3%, 11.8%, 18.7%) perhaps for the administration to be concerned about it.

f. Attitudes of Lay Citizens:

12. Families will get used to several short vacations and most will give mild or strong support after one year.

(10.5, 28.6, 45.9, 11.1, 3.7)

13. The families in Track A will be the most negative toward the 45-15 Plan because they have to start first.

(16.8, 30.4, 36.6, 11.1, 5.0)

18. Other community agencies and programs, such as park and recreation, church, and summer camp, will quickly adjust with little complaint to the 45-15 Plan.

(9.3, 19.3, 44.1, 21.1, 6.2)

22. Some families will move out of the school district because of the 45-15 Plan.

(24.2, 37.9, 27.3, 8.7, 1.9)

23. Some families will move into the school district because of the 45-15 Plan.

(8.1, 19.3, 41.6, 21.1, 9.9)

27. Parental attitudes, on the average, will improve toward the school district under the 45-15 Plan.

(10.5, 27.3, 52.8, 8.1, 1.2)

41. Taxpayers without children will feel more positive toward District #96 in the next five years.

(10.5, 24.8, 49.0, 9.3, 6.2)

Obviously, the staff was not agreeing very well on what the reactions of the community would be, though most were either positive or neutral. The one exception was the large agreement (62.1%) that some families would leave the community because of the 45-15 Plan, though a small number (10.6%) did not believe this either.

g. Attitudes of Professional Staff:

7. Your principal's attitude toward the 45-15 Plan is good.

(58.4, 25.5, 14.3, 1.2, 0.6)

8. Your own attitude toward the 45-15 Plan is good.

(39.1, 27.9, 25.5, 3.7, 3.7)

g. Attitudes of Professional Staff (continued)

These items showed the staff more positive toward the 45-15 Plan than they anticipated the community to be.

h. Professional Contracts:

1. The length of my contract for next year is just right.

   (64.0, 13.0, 13.7, 3.1, 6.2)

2. The track(s) I will be working with is(are) the one(s) I wanted.

   (62.1, 18.0, 10.5, 3.7, 5.6)

3. My salary per month for next year (i.e., ignore the length of your contract) is excellent compared to salaries of surrounding districts.

   (6.2, 13.0, 26.7, 24.8, 29.2)

16. Elementary education should have more men teachers than presently.

    (34.8, 29.2, 18.6, 10.5, 6.8)

It is apparent that a large number of the staff agreed heartily that the length of their contract and the track(s) which they would be working with were satisfactory. It should be noted that Items "1" and "2" received a higher percentage of responses for "heartily agree" than any other questions in this questionnaire. This provision is a direct outcome of the 45-15 Plan. In contast is their obvious dissatisfaction with their salary schedule, a feature not related to the 45-15 Plan.

i. Costs:

21. Building maintenance and major repair costs per month per building will go up.

    (16.8, 27.3, 38.5, 13.7, 3.7)

30. There will be greater variation in the sizes of classes under the 45-15 Plan.

    (17.4, 25.5, 41.0, 11.8, 4.3)

31. Administrative costs per child will go up under the 45-15 Plan as compared to similar districts operating under a traditional nine-month schedule.

    (10.5, 24.2, 45.3, 16.1, 3.7)

33. Costs of instructional materials and equipment per child per year will increase.

    (11.1, 23.0, 43.5, 17.4, 5.0)

i. Costs (continued)

34. Building costs (debt retirement) per child will go down under the 45-15 Plan.

(12.4, 24.2, 54.6, 6.8, 1.9)

The results on these questions provide a surprise. Even though the top administrative staff and the school board have anticipated equal or reduced costs per child for administration, maintenance and repair, and instructional materials and equipment, a larger number of the staff disagreed than agreed! Perhaps the "per child" and "per month" phrases were not fully understood when the items were read. While not as large a number, 8.7% also thought building costs would remain the same or go up under the 45-15 Plan! The results are so surprising, added effort might be made in the future to find explanations for these opinions.

j. Tooling Up: (Planning, Inservice, Professional Understandings)

6. Your principal's understanding of the 45-15 Plan is good.

(42.8, 34.8, 19.3, 2.5, 0.6)

9. The planning done by the administrative staff other than your principal has been good.

(24.8, 30.4, 26.7, 13.7, 4.3)

25. Inservice training is needed if the 45-15 Plan is to work well.

(43.5, 25.5, 18.6, 10.5, 1.9)

35. Teachers will make less use of cumulative folders under the 45-15 Plan.

(5.0, 6.2, 38.5, 37.9, 12.4)

FACTOR ANALYSIS OF QUESTIONNAIRE

Out of the total sample of 240, there were 224 that were almost or totally completed on all items. Product moment correlations were computed, using a program that could handle missing data. The smallest n on any item was 218.

The principal axis factor analysis program generated fifty factors. The first five are shown in Table 2:

Table 2

Summary of Principal Axis Factor Analysis

Factor	Variance	Percent Variance	Cumulative Percentage
1	6.36	12.7	12.7
2	3.27	6.5	19.2
3	2.48	5.0	24.2
4	2.18	4.4	28.6
5	2.08	4.2	32.7

The items with the largest loadings on the first four factors are given in Table 3:

Table 3

Items with Highest Factor Loadings - Principal Axis

Factor 1		Factor 2		Factor 3		Factor 4	
Item	Loading	Item	Loading	Item	Loading	Item	Loading
8	.63	33	.64	43	-.54	40	-.44
12	.63	38	.61	3	-.47	30	.42
42	.62	36	.53	7	-.44	19	.41
9	.59	31	.52	6	-.41	21	.39
11	.56	35	.48	27	.36	39	-.38
27	.55	13	.41	1	-.35	32	-.34
40	.53	19	.41	24	.34		
26	.52	17	.40	2	-.32		
29	.52	32	.35				
39	.51	40	.35				

An orthogonal rotation analysis was also used. The results are given in Tables 4 and 5:

Table 4

Summary of Orthogonal Rotation Analysis

Factor	Variance	Percent Variance	Cumulative Percentage
1	3.3	13.6	13.6
2	3.1	12.7	26.4
3	2.7	11.7	37.5
4	2.7	10.9	48.4
5	2.3	9.7	58.1
6	2.3	9.3	67.4
7	2.1	8.6	76.0
8	2.1	8.5	84.6
9	2.0	8.1	92.7
10	1.8	7.3	100.0

Table 5

Items with Highest Factor Loadings - Orthogonal Rotation

Factor 1		Factor 2		Factor 3		Factor 4	
Item	Loading	Item	Loading	Item	Loading	Item	Loading
37	.66	32	.71	38	.68	6	.83
41	.53	40	.61	35	.56	7	.79
42	.52	39	.53	17	.52	9	.49
26	.50	23	.51	10	.50	8	.46
11	.48	24	.51	36	.47	3	.38
27	.45	9	.47	26	.39	11	.30
39	.44	27	.42	33	.31		
8	.42	42	.36	19	.30		
25	.41	28	.35	8	.28		
34	.41	41	.30	13	.27		

The means, standard deviations, and principal axis loadings are given in Table 6:

Table 6

Summary of Information on Individual Items

Item	Mean	Standard Deviation	Factors	Loadings
1	1.6	1.2	1 (.33)	3 (.34)
2	1.6	1.2	1 (.39)	3
3	3.3	1.5	1 (.35)	3 (-.47)
4	2.3	1.2	1 (.35)	5 (-.38)
5	3.0	1.3	5 (-.38)	
6	1.8	0.9	1 (.51)	3 (-.41)
7	1.5	0.8	1 (.40)	3 (-.44)
8	2.0	1.0	1 (.64)	
9	2.3	1.2	1 (.59)	

Table 6, Summary of Information on Individual Items (continued)

Item	Mean	Standard Deviation	Factors	Loadings
10	2.7	1.2		
11	2.5	1.0	1 (.56)	
12	2.6	1.0	1 (.62)	
13	2.6	1.0	2 (-.41)	
14	3.0	1.2	1 (.34)	
15	2.3	1.0		
16	2.1	1.3		
17	2.7	1.4	2 (.41)	
18	2.9	1.1	1 (.42)	
19	2.4	1.1	2 (.41)	4 (.41)
20	3.0	0.9	1 (.48)	
21	2.6	1.1	2 (.31)	4 (.39)
22	2.4	1.1		
23	3.1	1.1	1 (.38)	
24	2.7	1.2	3 (.34)	
25	2.0	1.1	1 (.38)	
26	2.3	0.9	1 (.52)	
27	2.6	0.9	1 (.55)	3 (.35)
28	2.7	1.0	1 (.45)	
29	2.6	1.1	1 (.52)	
30	2.6	1.1	4 (.42)	
31	2.8	1.1	2 (.52)	
32	2.7	1.1	1 (.33) 2 (.36)	4 (-.34)
33	2.8	1.1	2 (.64)	
34	2.6	1.1		
35	3.3	1.1	2 (.48)	
36	3.1	1.1	2 (.53)	
37	1.6	0.9	1 (.49)	
38	3.3	1.1	2 (.61)	
39	2.7	1.0	1 (.51)	
40	2.8	1.1	1 (.54) 2 (.35)	4 (-.44)
41	2.7	1.0	1 (.38)	
42	2.1	1.2	1 (.62)	
43	1.5	1.1	3 (-.54)	

STUDY OF SUB-SAMPLE DIFFERENCES

Means on all items were computed after the sample had been split by various criterion variables. The criterion variables were grade level (primary, intermediate, and junior high school), membership on teaching teams, professional role (teacher, administrator, para-professional, other), sex, and whether employment would be expected in the district for another two years. Because age was used as a continuous variable, correlations are reported instead. The tables below provide the means, standard deviations, and t-values for those means that significantly varied.

All items have values as follows:

1 = Heartily Agree
2 = Mildly Agree
3 = Don't Know or Mixed Reactions
4 = Mildly Disagree
5 = Strongly Disagree

Table 7

Primary, Intermediate, and Junior High School Staff Compared on Items Showing Significant Differences Among Means

Item	Primary		Intermediate		Junior High School		T-test		
	Mn	S.D.	Mn	S.D.	Mn	S.D.	1 vs 2	1 vs 3	2 vs 3
1	1.36	1.00	1.66	1.22	1.78	1.27	1.50	2.06	0.51
6	1.68	0.90	2.04	0.91	1.80	0.85	2.18	0.75	1.40
13	2.62	1.00	2.43	1.09	2.87	0.98	1.04	1.39	2.25
18	3.01	1.06	2.73	1.09	2.60	1.10	1.46	2.12	0.64
21	2.75	1.10	2.34	1.18	2.45	1.12	2.02	1.49	0.53

Table 8

Membership on Cooperative Teams Compared on Items Showing Significant Differences Between Means

Item	Members		Non-Members		T-Value
	Mn	S.D.	Mn	S.D.	
4	1.80	1.23	2.62	1.13	4.60
5	3.69	0.53	3.79	1.48	3.15
41	2.73	1.06	2.36	1.03	2.34

Table 9

Professional Role Compared on Items Showing Significant Differences Among Means

Item	Teacher		Administrator		Other		T-Value		
	Mn	S.D.	Mn	S.D.	Mn	S.D.	1 vs 2	1 vs 5	2 vs 3
3	3.47	1.44	3.50	1.27	2.05	1.16	0.06	4.05	3.05
6	1.82	0.91	1.10	0.74	1.56	0.86	2.45	1.18	1.41
7	1.58	0.82	1.09	0.32	1.44	0.78	2.60	0.66	2.09
8	1.99	1.05	1.20	0.63	2.00	1.08	2.36	0.04	2.13
9	2.40	1.20	2.10	0.74	1.78	1.21	0.79	2.11	0.76
12	2.70	1.03	2.00	0.82	2.28	1.13	2.11	1.64	0.68
13	2.57	1.07	3.50	1.27	3.00	1.03	2.66	1.63	1.13
17	2.64	1.31	3.70	1.83	2.39	1.79	2.44	0.77	1.85
35	3.29	1.20	4.00	1.05	3.17	1.04	1.83	0.44	2.02
38	3.26	1.22	4.00	0.94	3.05	1.30	1.88	0.69	2.01
41	2.65	1.08	2.30	1.16	2.50	1.04	1.00	0.56	2.47
42	2.05	1.23	1.40	0.70	2.44	1.15	1.66	1.30	2.61

Table 10

Sex Differences Compared on Items Showing Significant Differences Between Means

Item	Men		Women		T-Value
	Mn	S.D.	Mn	S.D.	
3	3.57	1.40	3.13	1.52	2.12
16	1.73	1.02	2.24	1.33	2.94
29	2.77	1.06	2.36	1.11	2.17

Table 11

Expected Employment (Two Years Hence or Not) in Valley View District Compared on Items Showing Significant Differences Between Means

Item	Expect Employment in Two Years		Do Not Expect Employment		T-Value
	Mn	S.D.	Mn	S.D.	
8	1.67	0.84	2.17	1.28	3.24
18	2.60	1.09	3.04	1.16	2.63
26	1.98	1.07	2.47	1.02	3.10
28	2.58	1.07	2.93	1.11	2.17
38	3.52	1.13	3.05	1.35	2.57

Table 12

Correlations Between Age and Individual Items on the "Final Professional Evaluation" Scale
(Only Highest Values Shown)

Item	Product Moment Correlation
45 (Role)	.25
16	.14
9	.14
30	-.13
29	-.13
4	.12
38	.12

APPENDIX E

STUDENT ACHIEVEMENT AND ABILITY

Because existing achievement test scores for grades 1-6 were the results of individual teacher administration with accompanying variations in reliability, it was decided to test a stratified sample under rigorous conditions of administration during the month of April, 1970. Two teachers with past experience in test administration first gave the battery of tests under the direction of the project director. When he was assured that they fully understood the details of the administration and would not significantly depart from the instructions (including time limits, assistance, seating arrangements, movement, and additional materials), they then completed the testing with the assistance of another teacher who helped bring the pupils to the testing room and to do monitoring. Pupils were greeted with a friendly smile and other attention, and given these instructions:

> Once the test begins, please work hard but you cannot talk to each other or help each other. The results of this test will in no way influence your class grades. The purpose of this test is to find out whether the 45-15 Plan will help you in your school work. Do you have any questions?

The instructions for the test administration were used verbatim as given in the publisher's Directions for Administration: Metropolitan Achievement Tests, dated 1959. The tests are published by Harcourt, Brace and World, Inc. Form A was used. The tests for grades 1-4 were hand scored and tabulated. All additions and tabulations were re-checked once. Every tenth test was re-scored to discover if any gross errors were occurring. As only minor errors (none more than one test item in a sub-test) were found in seven of the seventy-five tests re-scored, the remaining tests were not re-scored. For grades 5 and 6, a machine-scored answer sheet was used. The publisher provided the scoring service. The tests of one grade at one school were scored by hand to see if the results agreed with the machine scoring, which they did.

Because the regular junior high school achievement tests were administered to all students by the same test administrators, these results were used for the seventh grade instead of administering another battery. The test used for the seventh grade was The Stanford Achievement Test, Form X , published by Harcourt, Brace and World, Inc. Test results for the eighth grade were not used because these students would not be exposed to the 45-15 Plan since they graduated in June, 1970.

The stratified sample for grades 1-6 was selected by the following procedure. All pupils were placed into one of 736 possible cells of a matrix. One pupil was drawn randomly from each cell if it contained a sample. The matrix, a five-dimensional one, con-

sisted of grades (6), schools (5), attendance tracks (4), verbal intelligence by quartiles (4), and sex (2). Quartiles for intelligence were determined for each school, by grade. Some extra students were tested whose scores were used in combined comparisons to compensate for some empty cells. However, only two schools had grades 5 and 6, and one school did not have grade 4. This reduced the number of cells that could contain a sample to 736 (23 grades × 4 tracks × 4 intelligence quartiles × 2 sexes). In addition, a few potentially filled cells did not have a sample. Thus, there was no student for the cell of school 1, grade 1, quartile 3, attendance track 1, boy. However, there was a boy who could be put into that cell except for being in the inappropriate attendance track. Hence, his scores were used when comparisons were made that ignored differences among tracks, such as when comparing schools with each other. Despite this possibility, a few cells were impossible to fill for some of the comparisons. Hence, after t-tests were calculated on the differences between means of the various I.Q. and achievement test results, all of the t-tests close to or exceeding the 5% level of confidence were reviewed to see if any of the data used in the calculations were incomplete because of empty cells. A few were found, so the data was re-processed by inserting the means of combined attendance tracks or schools. If schools were being compared, then the means of the combined remaining tracks were used. If tracks were being compared, then the means of the combined remaining schools were used. However, these adjustments did not change any t-values from one level of significance (5%, 2%, 1%, 0.1%) to another.

The results of the tests are given in the various tables which follow.

Table 1

Tests (Means), Grade 1, School and Attendance Tracks

Achievement (Standard Scores)

School	I.Q.	N	Word Knowledge	Word Discrimination	Reading	Arithmetic	Mean
1	113.0	33	42.7	45.7	39.4	50.2	44.5
2	112.7	31	53.0	53.3	46.1	50.1	50.6
3	109.8	31	56.0	56.6	52.4	52.5	54.4
4	105.5	31	52.2	51.4	49.8	50.6	51.0
5	105.0	27	49.6	48.1	44.1	48.6	47.6
Track							
1	108.4	38	50.7	50.5	46.3	49.9	49.4
2	112.5	41	49.9	52.2	45.1	50.3	49.4
3	107.6	39	50.2	50.4	46.2	50.9	49.4
4	108.7	35	51.8	51.0	47.8	50.6	50.3

Note: None of the differences between tracks reach the 5% level of significance.

Table 2

Significant T-test Values of Differences Between Means, Grade 1

School	I.Q.	Word Knowledge	Word Discrimination	Reading	Arithmetic
1 vs 2	----	4.01	4.46	3.72	----
1 vs 3	----	6.00	6.59	7.74	----
1 vs 4	----	3.64	2.70	5.54	----
1 vs 5	----	2.69	----	2.19	----
2 vs 3	----	----	----	2.98	----
2 vs 4	----	----	----	----	----
2 vs 5	----	----	2.43	----	----
3 vs 5	----	3.14	4.07	3.37	2.42
4 vs 5	----	----	----	2.15	----

Table 3
Tests (Means), Grade 2, School and Attendance Tracks

School	I.Q.	N	Achievement (Standard Scores) Word Knowledge	Word Discrim.	Reading	Spelling	Arithmetic (Prob Solv)	Arith. (Comp.)	Arith. Total	Mean
1		32	45.0	46.7	43.2	48.6	45.1	55.0	48.7	47.5
2	115.1	27	51.9	49.6	50.2	57.2	53.2	57.2	55.2	53.5
3	103.1	32	51.6	54.3	48.9	51.9	50.5	61.3	54.3	53.3
4		31	49.3	48.6	47.4	49.3	45.5	50.8	47.7	48.4
5	106.3	30	50.7	48.1	47.2	53.2	51.5	55.9	54.7	51.5
Track										
1	108.1	37	50.3	48.4	47.6	50.8	49.0	55.8	51.9	50.5
2	105.0	40	49.9	51.0	47.5	53.7	50.8	56.2	53.1	51.7
3	109.8	40	49.9	50.3	47.3	54.0	49.0	57.6	52.5	51.5
4	108.0	35	48.4	47.9	46.9	48.4	47.1	54.3	49.6	48.9

Note: None of the differences between attendance tracks reach the 5% level of significance.

Table 4
Significant T-test Values of Differences Between Means, Grade 2

School	Word Knowledge	Word Discrim.	Reading	Spelling	Arithmetic (Prob Solv)	Arith. (Comp.)	Arith. Total
1 vs 2	2.55	----	3.35	3.99	3.55	----	2.48
1 vs 3	3.18	3.75	2.79	----	2.08	2.22	----
1 vs 4	2.09	----	----	----	----	----	----
1 vs 5	2.84	----	----	2.08	2.85	----	----
2 vs 3	----	----	----	----	----	----	----
2 vs 4	----	----	----	2.75	2.72	2.01	2.58
2 vs 5	----	----	----	----	----	----	----
3 vs 4	----	2.49	----	----	----	3.82	2.08
3 vs 5	----	2.51	----	----	----	2.03	----
4 vs 5	----	----	----	----	2.19	----	2.13

Table 5
Tests (Means), Grade 3, School and Attendance Tracks

School	I.Q.	N	Achievement (Standard Scores) Word Knowledge	Word Discrim.	Reading	Spelling	Lang. Total	Arith. (Comp.)	Arithmetic (Prob Solv)	Mean
1	102.8	32	47.2	47.8	46.7	51.4	47.2	45.1	43.1	47.0
2	103.7	32	47.9	48.5	46.0	51.5	49.2	49.0	44.1	48.1
3	103.7	31	50.5	49.5	47.8	54.2	47.9	49.5	46.1	48.4
4	100.2	23	46.9	46.9	44.5	47.7	44.7	46.6	43.2	45.6
5	103.2	32	50.1	51.6	47.0	52.9	49.3	50.2	47.1	49.6
Track										
1	104.5	40	48.1	49.7	46.7	52.2	47.9	47.8	45.2	48.0
2	101.7	40	47.6	47.3	46.0	50.1	47.0	47.8	43.7	47.1
3	103.3	39	49.3	50.3	47.1	52.6	48.1	47.3	43.7	48.1
4	2.5	34	49.1	48.1	45.8	51.3	47.7	49.4	46.2	48.3

Note: None of the differences between attendance tracks is significant.

Table 6
Significant T-test Values of Differences Between Means, Grade 3

School	I.Q.	Word Knowledge	Word Discrim.	Reading	Spelling	Lang. Total	Arith. (Comp.)	Arithmetic (Prob Solv)
1 vs 2	----	----	----	----	----	----	----	----
1 vs 3	----	----	----	----	----	----	----	----
1 vs 4	----	----	----	----	----	----	----	----
1 vs 5	----	----	----	----	----	----	2.33	----
2 vs 3	----	----	----	----	----	----	----	----
2 vs 4	----	----	----	----	----	----	----	----
2 vs 5	----	----	----	----	----	----	----	----
3 vs 4	----	----	----	----	2.64	----	----	----
3 vs 5	----	----	----	----	----	----	----	----
4 vs 5	----	----	2.03	----	2.21	2.17	----	----

Table 7
Tests (Means), Grade 4, School and Attendance Tracks

School	I.Q.	N	Achievement (Standard Scores) Word Knowledge	Word Discrim.	Reading	Spelling	Lang. Total	Arith. (Comp.)	Arithmetic (Prob Solv)	Mean
1	103.1	32	51.4	51.5	45.5	55.3	49.1	50.4	46.2	49.9
2	107.1	31	55.2	56.8	53.6	59.4	55.9	62.5	56.9	57.5
3	104.3	32	53.7	56.3	49.5	54.1	49.6	62.8	51.9	54.0
5	111.5	37	53.4	54.3	52.2	58.0	56.7	64.0	53.9	56.1
Track										
1	104.7	29	53.6	55.9	49.9	58.8	55.6	64.2	55.5	56.2
2	103.6	30	54.1	55.2	51.1	59.0	54.2	56.9	51.0	54.5
3	108.7	34	52.1	52.6	49.1	53.3	51.3	60.6	52.5	53.1
4	101.5	33	54.0	55.5	49.6	56.1	50.5	58.0	50.3	53.4

Note: Only one difference between attendance tracks reaches the 5% level of significance, which was between Tracks 1 and 3 on spelling. (T = 2.11 with 61 degrees of freedom.)

Table 8
Significant T-test Values of Differences Between Means, Grade 4

School	I.Q.	Word Knowledge	Word Discrim.	Reading	Spelling	Lang. Total	Arith. (Comp.)	Arithmetic (Prob Solv)
1 vs 2	----	----	2.77	3.33	----	2.48	3.81	3.95
1 vs 3	----	----	2.54	2.02	----	----	3.32	----
1 vs 5	----	----	----	3.42	----	2.84	4.56	3.06
2 vs 3	----	----	----	----	----	----	----	----
2 vs 5	----	----	----	----	----	----	----	----
3 vs 5	----	----	----	----	----	2.20	----	----

Table 9
Tests (Means), Grade 5, School and Attendance Tracks

		Achievement Scores (Grade Equivalents)*										
School-Grade 5	N	1	2	3	4	5	6	7	8	9	10	Mean
2	63	5.1	5.1	5.5	5.0	5.1	5.3	5.1	4.9	4.8	5.2	5.1
3	32	6.2	5.9	6.3	5.9	6.1	5.7	5.6	5.4	5.5	5.9	5.9
5	32	6.0	5.5	6.3	6.3	6.7	5.9	5.5	5.6	5.3	5.9	5.9
School-Grade 6												
2	33	8.2	7.3	7.6	7.1	7.9	6.8	7.0	7.2	7.4	7.0	7.7
3	60	7.3	6.4	6.7	6.2	6.5	6.1	6.1	5.8	5.7	6.5	6.3
5	33	6.8	6.4	6.2	6.1	6.3	6.2	6.2	6.2	5.9	6.1	6.2
Track-Grade 5												
1		6.0	5.6	5.7	5.8	5.9	5.4	5.2	5.5	5.3	5.8	5.6
2		5.6	5.3	5.8	5.4	5.6	5.5	5.3	4.9	5.0	5.3	5.4
3		5.9	5.5	5.9	5.6	6.0	5.7	5.6	5.2	5.4	5.7	5.6
4		5.8	5.3	6.2	5.5	5.5	5.6	5.2	5.2	4.7	5.4	5.4
Track-Grade 6												
1		7.6	6.8	7.2	6.7	6.9	6.5	6.4	6.3	6.6	6.6	6.7
2		7.7	7.0	6.9	6.7	7.6	6.3	6.5	6.6	6.4	6.7	6.8
3		7.1	6.3	6.6	6.3	6.5	6.2	6.3	6.2	6.0	6.3	6.4
4		7.0	6.4	6.4	5.9	5.9	6.0	6.2	5.8	5.6	6.6	6.2

*Code:
1 = Word Knowledge
2 = Reading
3 = Spelling
4 = Language
5 = Language Study Skills
6 = Arithmetic Computation
7 = Arithmetic Problem Solving
8 = Social Studies Information
9 = Social Studies Study Skills
10 = Science

Table 10
Significant T-test Values of Differences Between Means, Grades 5-6

	Achievement Tests (Grade Equivalents)*									
Grade 5 - School	1	2	3	4	5	6	7	8	9	10
2 vs 3	----	2.23	2.17	2.64	2.25	2.42	2.44	----	2.00	2.38
2 vs 5	----	----	----	3.89	3.77	3.64	----	2.42	----	2.31
3 vs 5	----	----	----	----	----	----	----	----	----	----
Grade 6 - School										
2 vs 3	----	----	2.18	2.58	2.71	3.44	3.00	3.53	3.49	----
2 vs 5	2.40	----	3.04	2.57	2.74	2.36	2.21	2.07	2.59	----
3 vs 5	----	----	----	----	----	----	----	----	----	----
Track - Grade 6										
1 vs 2	----	----	----	----	----	----	----	----	----	----
1 vs 3	----	----	----	----	----	----	----	----	----	----
1 vs 4	----	----	----	----	----	----	----	----	----	----
2 vs 3	----	----	----	----	----	----	----	----	----	----
2 vs 4	----	----	----	2.09	2.85	----	----	----	----	----
3 vs 4	----	----	----	----	----	----	----	----	----	----

*Code for tests:

1 = Word Knowledge
2 = Reading
3 = Spelling
4 = Language
5 = Language Study Skills
6 = Arithmetic Computation
7 = Arithmetic Problem Solving
8 = Social Studies Information
9 = Social Studies Study Skills

Table 11

Tests (Means), Grade 7, By Attendance Track
Stanford Achievement Tests, Grade Equivalents

	Achievement Tests (Taken in October, 1969)							
Track	Paragraph Meaning	Spelling	Language	Arithmetic Computation	Arithmetic Concepts	Arithmetic Applied	Social Science	Science
1	6.5	7.3	6.5	5.5	6.4	6.5	6.5	6.5
2	6.3	7.1	6.2	5.3	6.1	6.4	6.5	6.3
3	6.4	7.2	6.4	5.5	6.0	6.3	6.3	6.2
4	6.3	7.0	6.3	5.4	5.9	6.3	6.4	6.0

Note: None of the differences read a t-value significant at the 5% level of confidence.

APPENDIX F

COMMUNITY SURVEY QUESTIONNAIRE

Sample

Data Collection

Results

SAMPLE

A sample of 400 families was selected out of the total school district. Scheduling of families had been done by "census units." Each unit is a small area (approximately a square city block in size) that has some indication of being a sociological unit. Hence, some units are much larger or smaller than others. All families in one unit are on the same attendance track.

Units were grouped by attendance track (4), housing development (4), and village (3, one being the rural area). Units were randomly selected out of the 48 cells; six families were selected out of each unit by consecutive house number; half, low to high; half, high to low. When houses were empty or no one responded to a house call, the next family on the list was selected. This should provide a total sample of 384. Because some extras were obtained from some units, these were left in the final analysis when no significant differences or trends were found among housing developments or "village" areas.

DATA COLLECTION

All questionnaires were hand delivered. If no one was found at home, one return visit was made. If delivery could not be made, an alternate family was selected. Once a questionnaire was delivered, every attempt was made to obtain the return of the questionnaire, both by phone and by personal visit. On delivery, a specific time was established for the collector to return to the house. The whole procedure produced a return of slightly more than 95% of all delivered questionnaires. However, nine of the questionnaires were not used because of not being filled out or only briefly responded to. Mostly these were by families who had just recently moved into the district. In hindsight, it probably would have been better not to have included anyone in the sample who had not resided in the district at least six months, or at least to have analyzed the results separately.

RESULTS

The first two tables show the results of the total sample. Means are used on those items where a continuous variable is evident or implicit. They are shown in Table 1. Table 2 shows the discrete variables.

Table 1
Means, Standard Deviations, and Size of Total Sample
(1 = Excellent; 2 = Good; 3 = Average; 4 = Poor; 5 = Very Poor)

		N	Mean	S.D.
1.	Bus schedules	275	3.28	1.08
2.	Elementary teachers	270	3.92	0.71
3.	Junior high school teachers	181	3.67	0.75
4.	Instructional materials	270	3.91	0.83
5.	Elementary building	312	4.21	0.80
6.	Junior high school building	235	4.19	1.08
7.	Principals	245	3.94	0.71
8.	Special services	250	4.04	0.95
9.	Efficient use of tax money	264	2.85	1.16
10.	Information on 45-15 Plan	330	3.62	1.13
11.	Worth of 45-15 Plan	260	3.67	1.31
26.	How many years have you lived in this community?	388	5.32	5.31

Table 2
Frequency of Responses to Specific Items

12.	Have children enrolled	Yes 263	No 127	
13.	Will change vacation plans	Yes 100	No 207	? 77
14.	Could change opinion of 45-15 Plan	Yes 81	No 294	? 3
15.	Other members of family disagree about worth of 45-15 Plan	Yes 32	No 298	? 53
16.	Major reasons why the 45-15 Plan was adopted:			
	a. Saving building cost		254	
	b. Save instructional costs		87	
	c. Save administrative costs		76	
	d. Save heating costs		25	
	e. Improve instruction		144	
	f. Raise teacher salaries via twelve months employment		62	
	g. Bring in more men teachers		23	
	h. Give seasonal vacations		14	
	i. Avoid over-crowded classrooms		309	
	j. Other		14	
17.	Would you vote for higher taxes to avoid the 45-15 Plan?	Yes 37	No 276	? 76

Table 2, Frequency of Responses to Specific Items (continued)

18.	Do you believe the 45-15 Plan will actually save money?	Yes 154	No 115	? 121
19.	Are in favor or more men teachers in the elementary schools?	Yes 177	No 67	? 145
20.	Would you support the Plan if students learn more but no money is saved?	Yes 278	No 45	? 64
21.	Would you support the Plan if the Plan saves 5% on costs but students do not learn more?	Yes 155	No 163	? 72
22.	Are you aware of special problems your children have in school?	Yes 106	No 163	? 120
24.	Is there another person (not an educator) whom you trust and who is well-informed about the 45-15 Plan?	Yes 40	No 334	? 18
25.	If your answer were "yes" on Item 24, have you talked to this person?	Yes 8	No 10	? ---
27.	Who are you?	Mother	191	
		Father	62	
		Mother and Father	122	
		Other	12	
28.	Would you be willing to be interviewed every six months about the 45-15 Plan?	Yes 171	No 207	

The most important concern was whether there were initial, significant differences among attendance tracks. There were very few. However, one of the differences was great, that of the older residency of the third attendance track. The only explanation that seems valid is the higher number (about 19) of rural residents in this track who obviously would be older residents in a school district that is growing rapidly as a "bedroom" community. The data for the attendance groups are given in Table 3:

Table 3
Means and Frequencies of Four Attendance Groups

Item		Attendance Groups A Mn	B Mn	C Mn	D Mn
1		3.38	3.24	3.15	3.35
2		3.95	4.03*	3.93	3.76*
3		3.74	3.80	3.63	3.49
4		3.39	4.00	3.90	3.86
5		4.29	4.30	4.18	4.10
6		4.30	4.25	4.12	4.09
7		3.91	4.02	3.96	3.85
8		4.09	3.98	4.09	3.96
9		3.04	2.98	2.76	2.68
10		3.58	3.66	3.60	3.65
11		3.59	3.91	3.66	3.56
Mean, Items 1-11		3.80	3.70	3.76	3.63
12	Yes	67	70	62	64
	No	32	28	32	35
13	Yes	34	31	16	19
	No	54	46	49	58
	?	9	20	27	21
14	Yes	23	20	13	25
	No	69	74	79	72
15	Yes	8	10	10	4
	No	77	71	71	79
	?	12	16	11	14
16	a	65	62	60	67
	b	20	21	18	29
	c	9	22	19	26
	d	6	7	5	7
	e	35	35	37	37
	f	14	17	16	15
	g	4	4	8	7
	h	1	4	6	3
	i	46	88	82	93
	j	2	5	3	4
17	Yes	11	7	8	11
	No	66	69	65	76
	?	21	22	21	12
18	Yes	41	33	33	47
	No	29	25	33	28
	?	28	40	29	24
19	Yes	46	38	45	48
	No	20	14	14	19
	?	33	45	36	31
20	Yes	79	75	61	63
	No	7	9	13	16
	?	13	13	18	20

* Difference reaches the 5% level of significance.

Table 3, Means and Frequencies of Four Attendance Groups (continued)

Item		Attendance Groups A	B	C	D
21	Yes	41	39	39	39
	No	41	40	40	42
	?	16	19	19	18
22	Yes	31	27	23	25
	No	36	39	46	42
24	Yes	9	7	7	17
	No	85	89	82	78
25	Yes	7	0	1	0
	No	10	0	0	0
26	Years	4.79	4.52	7.42	4.59
27	Mother	53	48	46	44
	Father	11	13	16	22
	Both	33	32	28	29
	Other	2	4	3	3
28	Yes	50	42	33	46
	No	48	53	59	47

The eleven items that rated various characteristics of the school district were correlated and factors generated. The correlations are given in Table 4:

Table 4
Correlations Among Rating Items, 1 through 11

	2	3	4	5	6	7	8	9	10	11
1	.31	.16	.16	.32	.18	.28	.14	.36	.24	.29
2		.56	.37	.34	.25	.53	.37	.52	.36	.33
3			.46	.21	.22	.44	.24	.45	.19	.19
4				.29	.31	.35	.47	.39	.25	.20
5					.47	.35	.32	.39	.29	.34
6						.28	.29	.34	.22	.33
7							.42	.55	.26	.24
8								.45	.21	.34
9									.42	.47
10										.50

Note that Items 10 and 11 (information received on the Plan and worth of the Plan) are as highly loaded with a "general attitude" factor (Factor 1) as are the other items.

A factor analysis (principal axis) was run on the eleven items, producing the results shown in Table 5. Factor 1 accounted for 27.2% of the variance.

Table 5
Factor Loadings on Eleven Items
(Principal Axis Analysis)

Item	Factor 1	Factor 2	Factor 3
1	.47	-.03	-.31
2	.74	-.05	-.13
3	.63	-.19	-.15
4	.62	.02	.05
5	.57	.26	-.08
6	.54	.09	.03
7	.68	.10	-.06
8	.59	.24	.16
9	.81	.02	.01
10	.52	.36	-.01
11	.64	-.04	.06

The differences that were significant are summarized in Table 6, using Chi^2 and all tracks together.

Table 6
Summary of Significant Differences Among Attendance Tracks
(x-1 times 4-1 degrees of freedom)

Item	Level of Significance
9	.02%
11	.05%
14	.01%
16c	.02%
25	.001%
26	.02%

As noted in Table 3, when Items 1 through 11 were compared by a t-test of differences between means, only one between two tracks reached the 5% level of significance. However, a chi-square is influenced by the actual distribution in each cell. This must account for Items 9 and 11 reaching a significant Chi^2 of 2% and 5%.

In Item 14, (could anything change their opinion), Track C is more sure of their opinion. This may be accounted for by their much longer residence in the community (7.4 years versus 4.5, 4.6, and 4.8). No obvious explanation occurs for Track A checking Item 16c (some administrative costs) less frequently. Item 25 (talking to others) might be explained in this way. Track A was the first attendance group to start (June 30) and thus been more anxious about the Plan. As noted earlier, Track C having a longer residency seems a function of the higher number of rural families in the sample.

APPENDIX G

COMMUNITY INTERVIEWS

Sample

Procedures

Results

SAMPLE

A sample of eighty families was selected out of the 400 who were given questionnaires. The method was to take twenty out of each attendance track who agreed to be interviewed. The final selection was made by taking from each attendance track the ten who scored the highest and the ten who scored the lowest on the mean of the first eleven items of the community survey questionnaire.

Each family was sent a letter telling them that they had been selected for a follow-up interview and that the interviewer would call to make an appointment.

Each family when called agreed to an interview. However, when the data was analyzed, one interviewee was left out of the results because he seemed out of touch with the community. Two other families shortly after the interview moved to new homes that placed them in other tracks. The new locations were used in assigning the attendance tracks, on the assumption that if sociological differences existed, the new neighborhoods probably represented more closely the self-images of each family. Because the employed interviewers had already left the community, the final sub-samples remained at twenty-one, twenty-one, seventeen, and twenty.

PROCEDURES

Each family was interviewed for a period that typically lasted from thirty to sixty minutes. An important part of the interview was a rating sheet left with the family by which they rated the qualities of the interviewer. The rating sheet was returned by a stamped envelope addressed to the director of the project. A total of sixty-three were returned. The results are shown in Table 1:

Table 1
Ratings Given by Families about Behavior of Interviewers

	Yes	No	No Response
1. Was the interviewer on time?	60	0	3
2. Did he answer all of your questions? (Interviewers were asked to make referrals when specific school decisions about families were involved.)	54	6	3
3. Was he friendly and polite?	63	0	0
4. Did he say or do anything that made you feel uncomfortable?	0	62	1
5. Do you trust him?	63	0	0
6. Did he ask any questions that you thought inappropriate?	0	63	0
7. Are there any questions he should have asked, but did not?	0	61	2

Table 1, Ratings Given by Families about Behavior of Interviewers (continued)

	Yes	No	No Response
8. Would you like to have him at your next interview session?	63	0	0

Below are listed some of the verbatim comments made by families:

A very polite gentleman. Very neat and well dressed. Also, I feel he is very educated.

It was a very well-conducted interview--clearly well prepared.

He couldn't answer our questions but he did give us the name of a man that would.

Mr. ---- presented a very favorable impression. He seemed to be knowledgeable and dedicated.

It's really very nice to be interviewed by someone who really listens to what you say. He didn't rush us or waste time either. Mr. ---- is a very pleasant person.

Interview was interesting and informative.

I would like to know if the evaluation will be available to the public, and if recommendations for changes and betterment will be included.

He was a very polite and courteous man. He let us add a lot of chatter to our conversation, concerning the 45-15 Plan.

Considering all the interruptions (caused by three children), he was most understanding and patient. He must have children of his own.

Mr. ---- was friendly and appeared to be a very capable young man.

We are so far very enthusiastic about the 45-15 Plan. I hope the children can adjust and like it--so far very good--no complaints.

I am very happy to be of help at any time, in any way.

I'm very sorry but I forgot the gentleman's name that interviewed me; but I would like him to come back at any time.

Mr. ---- was very courteous and answered all our questions and I hope we answered his.

A very polite gentleman. Very neat and well dressed. Also I feel he is very educated.

It seems the same questions asked were on the form I filled out. How would I know if he made any mistakes? He was pleasant and did only what he was supposed to do--asked the questions and we gave the answers.

Each family was asked if there would be any objections to being tape recorded. None objected, but six of the interviews were not recorded because of mechanical mistakes made by the interviewers. When possible, both parents were interviewed together.

All answers were first coded by one of the interviewers, and then by the director. Differences were discussed until an agreement was reached. Indications and cues about attendance tracks were removed to the extent possible while the coding was done. Some remarks made possible the apparent identification of tracks with some interviews.

RESULTS

Since a Chi^2 analysis revealed only one significant difference (5% level of confidence) among the tracks, the actual frequencies for each track are not reported here. The one difference was on Item 19, "What is the best thing you can think of that the schools could do for (your) children?" For some reason, Tracks A and D had a lot higher proportion who just did not give a response to the question, for a total of thirty-four versus twenty who did not respond in Tracks B and C. This may have been due to chance since so little seems to distinguish one track from another.

The one big difference that was evident in the questionnaires (longer residency of Track C) did not appear in the interviews. Since it appeared that the difference might be due to a larger rural group in Track C, the actual residency of the interview samples were studied. Just three of the rural group appeared in the Track C sample.

The results are given below in somewhat abbreviated form. The full interview schedule is given in Appendix A. Some information is omitted when the information does not seem significant for baseline purposes.

Table 2
Summary of Interview Information

1. What group are you in?

A = 21	C = 17
B = 21	D = 20

2. Will you have children in school this coming year?

Yes 71	No 5
Yes, in pre-school 3	

3. Please describe your vacations for the family during the last two years.

Length	Frequency	When
Weekends 2	Once 46	Summer 56
One week 4	Twice 20	Fall 2
Two weeks 39	Three or more 6	Winter 0
Three weeks 13		Spring 0
Four weeks plus 10		More than one 15
None 5		
Combination 6		

Who	Places	Activities
Whole family 50	Stay home 29	Visit relatives 40
Parents 6	Local 17	Pleasure 63
Combination 9	State 10	Educational 5
	Other states 57	Business 3
		Other 3

4. What changes will the 45-15 Plan cause in your vacation?

None 57	
Those to our advantage 24	
Those to our disadvantage 13	
Will go without children 0	
Will take children out of school 11	

5. What is your overall rating of the school district?

Excellent	30
Good	32
Average	9
Poor	2
Very Poor	3
Don't Know	3

6. and 7. What would you rate as the worst and best features of the district?

	Best	Worst
Arithmetic teaching	5	3
Arithmetic textbooks	1	1
Teaching of reading	20	3
Reading books	5	2
Science teaching	10	1

Table 2, Summary of Interview Information (continued)

	Best	Worst
Science materials	5	1
Social studies teaching	0	1
Social studies materials	0	0
Special education classes	17	3
Elementary teachers	18	3
Junior high school teachers	3	0
Music instruction	2	5
Art instruction	1	2
Recreational programs	2	13
Libraries	8	6
Bus schedule, last year	2	16
Bus schedule, next year	0	11
Schools children assigned to last year	0	2
Schools, this year	3	1
Attendance track	1	1
Principals	4	0
School board policies on expenditures	4	13
Amount of taxes	0	4
Information from schools	10	10
45-15 Plan	14	5

8.	Do you know any of the school board members personally?	Yes 8	No 71
9.	Have you ever talked to any of the school board members about the 45-15 Plan?	Yes 17	No 62
10.	Have you ever talked to a principal or a teacher about the 45-15 Plan?	Yes 22	No 57
11.	Have you ever talked to any of your neighbors about the 45-15 Plan?	Yes 69	No 9
	If "yes," did this help you form an opinion?	Yes 17	No 52
12.	Do you read most of the news articles on the 45-15 Plan?	Yes 69	No 9

13. What questions remain unanswered in your own mind about the 45-15 Plan?

How to change tracks	18
Student assignments	11
Vacation schedules	37
Air conditioning	16
Teacher fatigue	20

Table 2, Summary of Interview Information (continued)

Curriculum	19
How much children will learn	17
How much money will be saved	24
Children transferring or graduating into high school	45
How to use vacations	14
Other	7

14. What is your opinion of the 45-15 Plan?

Excellent	38
Good	22
Average	6
Poor	4
Very Poor	5
No Opinion	4

15. Do you believe the Plan will actually save money for the district? Yes 29 No 21 Not sure 29

16. Would you support the Plan if no money is saved but achievement tests show that students learn more? Yes 73 No 2 Not sure 4

17. Would you support the 45-15 Plan if it were to save 5% on total costs but achievement tests showed that the students learned the same amount as under the traditional school year? Yes 61 No 13 Not sure 5

18. Do your children have any special problems in school now? Yes 20 No 50 Not sure 5

19. What is the best thing you can think of that the schools could do for (your) children?

Educate them	50
Broaden interests	1
Individualize instruction	9
Maintain better discipline	8
Achieve better child-teacher-parent cooperation	1
Teach independence and responsibility	8
Get along with others	4
Other	14

Table 2, Summary of Interview Information (continued)

19a. Are the schools doing it? (See "19.")
Yes 44 No 16 Not sure 19

20. Should schools help all children to get better jobs?
Yes 60 No 9 Not sure 10

21. Do you want any of your children to go to college?
Yes 53 No 0 Not sure 1 Let them decide 18 Boys only 6

22. How long have you lived in this community?

Zero to six months	7
Six to twelve months	10
One to two years	14
Two to three years	8
Three to five years	5
Five to ten years	27
Ten plus years	7

23. Did the reputation of the school district in any way influence your decision to come?
Yes 13 Maybe 3 No 63

24. Are there any reasons why you might leave this area in the next two years?

No	28
Yes	1
Yes, neighbors	7
Yes, high school	8
Yes, transfer	22
Yes, taxes	7
Yes, other	6

25. Will the 45-15 Plan cause any change in your household budget?

No	52
Change time of purchase	8
More summer clothes	15
Other	2
Don't know	2

26. Will the 45-15 Plan change the times that friends and relatives visit your family?
Yes 7 No 68 Don't know 4

Table 2, Summary of Interview Information (continued)

27.	Do you know personally of any family who has moved into or out of the district because of the 45-15 Plan?	Yes 5	No 74
28.	Do you know personally of any family who will place their children into or take them out of parochial schools because of the 45-15 Plan?	Yes 6 Don't know 2	No 71

APPENDIX H

FISCAL ANALYSIS

Overview

Expenditures

Projections and
Considerations

Development and
"Start-Up" Costs

OVERVIEW

In 1969 and 1970 Valley View School District #96, Lockport, Illinois, laid plans to revise its school year calendar so that its school buildings would be able to serve more pupils. The new calendar, called the 45-15 Plan, has schools open all year long. Pupils are assigned to one of four attendance schedules so that one-fourth of the total pupils are on vacation at all times. The school buildings, then, are required to house only three-fourths of the total pupil load on any given day.

As a result, the apparent capacity of all the Valley View schools has been increased by one-third without any school construction taking place.

The district, in informing the public of its intentions, took the position that the 45-15 Plan was "born of necessity." That "necessity" involved several factors:

1. The State of Illinois limits the indebtedness of the district to 5% of its assessed valuation;

2. Industrial and commercial development in the district has not kept pace with the population growth. Per-pupil assessed valuation had declined sharply and the district had exhausted its legal bonding power;

3. In addition to its rapid pupil growth in grades one through eight, the State of Illinois required all elementary districts to offer a half-day kindergarten program starting in 1970-71.

4. By the end of the 1969-70 school year, the district would already be operating its schools beyond desirable capacities without kindergarten.

There were several courses of action open to the district:

1. Allow class sizes to continue to increase;

2. Lease space in area churches;

3. Adopt a double shift or split-shift program;

4. Apply to the Illinois School Building Commission for special assistance;

5. Use the existing schools in the summer;

6. Combinations of these.

Allowing class sizes to increase was not considered. Double-shift operation was considered an undesirable and temporary measure, not appropriate to a long-term problem.

Application was made to the Illinois School Building Commission for an emergency construction program. The commission had been created in 1957 to assist school districts in situations such as Valley View found itself. The commission operates on legislative appropriations which, although increasing over the past few years, have not been sufficient to prevent a backlog of applications from around the state.

The Valley View School District, then, adopted the 45-15 Plan to allow use of schools in the summer starting June 30, 1970.

Valley View's recent growth, while extreme, is not a unique story. The district was formed in the early 1950's to consolidate the operation of several small rural schools. The pace of transition from rural to a suburban residential community is speeded by Interstate 55, which cuts diagonally across the district's 41.5 square mile area.

An interchange between I-55 and Illinois Highway 53 effectively serves as the center of the district. Two incorporated villages, Bolingbrook and Romeoville, lie respectively on the north and south sides of I-55 near the interchange. Residents of these new villages have easy automobile access to Chicago industrial areas and are within forty minutes from the heart of Chicago's downtown Loop.

A survey of representative housing subdivisions in the district indicates that the homes are moderately priced compared to similarly located Chicago suburbs.

Table 1
Price Range of Housing Developments

Housing Development	House Price Range	Number of Bedrooms
Hampton Park	$21,000 - $30,000	3 and 4
Beaconridge	20,990 - 26,990	2 and 4 (townhouses)
Colonial Village	20,990 - 26,490	3
Indian Oaks	23,950 - 36,500	3, 4 and 5
Sugarbrook	19,900 - 26,900	3 and 4
Winston Woods	28,500 - 36,000	3 and 4

Residential growth has far outstripped any complementary industrial or commercial development insofar as the school district tax base is concerned.

Table 2 shows the steep decline in the district's per-pupil assessed valuation. Of the $117 million valuation in 1969, some $50 million was in residential property, another $50 million from a single electric power generator and the remaining 15% from other industrial and commercial properties.

The $50 million residential valuation represents roughly 5,000 homes each with a valuation of $10,000. Each new home yields 1.3 pupils on the average to the elementary schools. Clearly the continuing residential development will further erode the per-pupil tax base.

Table 2
Valley View District Wealth During the 1960's

School Year	Assessed Valuation	Pupil Enrollment at Start of Year	Per-Pupil Assessed Valuation
1960-1961	$ 63,974,810	900	$71,083
1961-1962	65,619,359	1,400	46,871
1962-1963	69,495,162	1,875	37,064
1963-1964	87,315,323	2,400	36,381
1964-1965	91,671,252	2,913	31,470
1965-1966	95,064,591	3,321	28,625
1966-1967	97,747,511	3,768	25,941
1967-1968	112,647,949	4,345	25,926
1968-1969	116,715,891	4,904	23,800
1969-1970	117,341,413	5,522	21,250

Since local property taxes support the major portion of the district's total budget, the eroding tax base has required a steady increase in the local tax rates.

Table 3
Valley View's Local Tax Rate in the 1960's

Year	Combined Rate in Dollars per $100 of Assessed Valuation
1960	$ .7880
1961	.8750
1962	.9720
1963	1.2240
1964	1.6450
1965	2.0680
1966	2.0560
1967	2.3940
1968	2.4230
1969	2.4240

It should be noted here that local taxes in Illinois are paid on the basis of property valuations for the calendar year prior to the start of the school fiscal year. Taxes collected during the 1969-70 school year were based on the 1968 valuation. In a rapidly-growing district, this cash-flow lag is costly.

The State of Illinois during the past several years has increased its share of the support of schools throughout the state. Revenues received by Valley View during the 1969-70 fiscal year reflect a continuing burden on local property in the tax base, however. About

two-thirds of the receipts are locally generated. About 75% of the expenditures are for education, 8% for building, 12% for bond retirement and interest, and 5% for other items.

Table 4
Valley View Receipts by Major Source, 1969-70

Source	Amount	
Local taxes, educational	$ 2,978,625.53	
Tax anticipation warrants	1,063,000.00	
		$4,041,625.53
State-federal aid	1,936,741.98	
Lunch (sales and aid)	242,173.68	
Interest on investments	18,824.22	
Other revenue	4,452.93	
Student-community services	23,553.78	
		2,225,746.59
Total building fund	746,891.18	
Building and interest fund	877,951.51	
		1,624,842.69
Transportation	373,119.79	
		373,119.79
IMRF Fund	79,988.51	
		79,988.51
Site and construction	5,586.79	
		5,586.79
Working cash fund	57,424.26	
		57,424.26
		$8,408,334.16

The majority of state support is allocated to the school instructional program on the basis of pupils' average daily attendance (ADA). This support formula takes into account the district's wealth through a "qualifying amount" based on assessed valuation. The formula ignores the tax rate set through local election.

An example of the current formula calculation and an explanation follow in Table 5.

Table 5
Illinois General State Aid Calculation
for Elementary Schools

Valley View 1969-70 School Year Calculation	Explanation
1. 1968 Assessed Valuation $116,715,891.00	
2. ADA (best six months' average) 5,272.45 pupils	(a) The average daily attendance (ADA) is computed for each calendar month. (b) Of these, the six months having the highest ADA are selected. (c) Total pupil attendance days in those best six months divided by the total number of days school was in session during those six months gives claimable ADA for grades K thru 8. (Claimable ADA for grades 9 thru 12 is multiplied by a weighting factor of 1.25).
3. State Guarantee (Line 2 × $520) $2,741,674.00	Total claimable ADA for the best six months is multiplied by the state support level of $520 per pupil.
4. Qualifying amoung (Line 1 × .0090) $1,050,443.01	However, each district is subject to a "qualifying amount" requirement which, for K-8 districts is 0.90% of the prior year's assessed valuation.
5. State aid amount payable (Line 3 minus Line 4) $1,691,230.99	This qualifying amount is subtracted from the "guarantee" to give the amount payable by the state. The amount payable by the state is subject to certain adjustments. It is never less, however, than $48 for each claimable ADA pupil.

Projecting residential construction and a reasonable industrial growth across the 1970's, Valley View can expect a one-third increase in assessed valuation by 1975. By 1980 the assessed valuation should near $200 million. This projection (in 1970 dollars) translates to a constant annual valuation growth of 4.75%.

Projecting a growth in assessed valuation based primarily on residential construction obviously means a growth in the pupil population. A great deal of effort and speculation has been devoted to estimating the pace of development during the 1970's in the area. Based on known development plans, there is no question the pace will continue to be raised.

Based on data collected by the villages' planners, local officials, and the school district, the following table gives a conservative projection of this residential growth translated into pupil enrollment.

Table 6
Valley View Enrollment Projection

Year	Bolingbrook Area				Romeoville Area				District Totals			
	K	1 - 6	7 - 8	Total	K	1 - 6	7 - 8	Total	K	1 - 6	7 - 8	Total
1970-71	340	1,725	525	2,590	450	2,670	815	3,935	790	4,395	1,340	6,525
1971-72	425	2,375	745	3,545	500	2,870	875	4,245	925	5,245	1,620	7,790
1972-73	570	3,170	990	4,730	550	3,070	935	4,555	1,120	6,240	1,925	9,285
1973-74	715	3,985	1,245	5,945	565	3,150	985	4,700	1,280	7,135	2,230	10,645
1974-75	860	4,800	1,505	7,165	585	3,250	1,015	4,850	1,445	8,050	2,520	12,015
1975-76	995	5,550	1,740	8,285	645	3,585	1,120	5,350	1,640	9,135	2,860	13,635
1976-77	1,105	6,160	1,930	9,195	705	3,945	1,235	5,885	1,810	10,105	3,165	15,080
1977-78	1,215	6,770	2,115	10,100	775	4,320	1,335	6,430	1,990	11,090	3,450	16,530
1978-79	1,320	7,370	2,310	11,000	840	4,690	1,470	7,000	2,160	12,060	3,780	18,000

EXPENDITURES

Expenditures are shown in the reproduced pages from the 1969-70 academic year "Report of Audit, Exhibit IV."

A summary of the audit is shown in Table 7. In it is shown a comparison with the widely-used Cost of Education Index (CEI) maintained and published by the School Management Magazine.

The CEI distinguishes between "Net Current Expenditures" and non-current or non-direct expenditures. Net Current Expenditures (NCE) are those which can be considered as directly affecting the quality of the current year's educational program. Not included in NCE are capital outlay, debt service, transportation.

The CEI offers expenditure comparisons on the basis of annual average daily attendance (ADA). Recognizing that a departmentalized junior high school program, such as the one operated in Valley View, costs more to operate than self-contained elementary classes, the CEI applies a weighting factor of 1.3 to the ADA of these pupils.

The 1969-70 ADA in Valley View grades 1-6 was 4,020. In grades 7-8 the 1,200-pupil ADA multiplied by the weighting factor of 1.3 gives 1,560. Total weighted ADA for Valley View, then, is 5,580 pupils.

Table 7
Recap of 1969-70 Expenditures
Valley View

Category	Expenditure		Amount per Pupil (5,580)	National Median %NCE	National Median Amount per Pupil
Administration	$ 207,698.90	5.7%	$ 37.22	3.9%	$ 22.67
Instruction	2,888,350.21	79.1%	517.64	77.2	449.23
Health	34,162.40	0.9%	6.09	0.6	3.66
Operation	389,731.57	10.7%	69.85	8.7	50.91
Maintenance	33,118.51	0.9%	5.94	3.0	17.19
Fixed charges	80,818.40	2.2%	14.48	6.3	36.42
Other (Attendance)	16,361.95	0.4%	2.93	0.3	1.59
Total NCE	$3,650,242.02	100.9%	$654.15	100.0%	$581.61

ELEMENTARY SCHOOL DISTRICT NO. 96
Romeoville, Illinois

EXHIBIT IV

STATEMENT OF CASH DISBURSEMENTS
For the Fiscal Year Ended June 30, 1970
(With Comparisons to Estimated Disbursements)

	Estimated Disbursements	Disbursements	Actual (Over) Under Estimated
Educational Fund			
Administration:			
Salaries	$ 139,584.75	$ 135,567.84	$ 4,016.91
Contractual services	51,348.54	47,416.90	3,931.64
Supplies	7,579.00	8,100.96	(521.96)
Travel	21,359.00	11,409.32	9,949.68
Other administrative expense	9,100.00	5,473.96	3,626.04
Total administration	$ 228,971.29	$ 207,968.98	$ 21,002.31
Instruction:			
Salaries:			
Principals and assistant principals	$ 145,400.00	$ 149,142.50	$(3,742.50)
Consultants and supervisors	112,460.00	91,687.65	20,772.35
Teachers - Elementary	1,831,000.00	1,844,701.74	(13,701.74)
Substitute teachers	24,200.00	35,658.42	(11,458.42)
Other instructional staff	122,119.42	128,469.51	(6,350.09)
Secretaries and clerks	98,589.70	89,505.07	9,084.63
Teachers - Aides	32,615.60	38,271.80	(5,656.20)
Other salaries	10,633.33	10,633.33	
Total instruction salaries	$ 2,377,018.05	$ 2,388,070.02	$(11,051.97)
Other instruction:			
Contractual services	$ 253,645.91	$ 230,514.18	$ 23,131.73
Textbooks	79,208.29	63,274.53	15,933.76
Library and audiovisual	61,904.20	53,785.83	8,118.37
Instructional supplies	108,494.87	84,971.96	23,522.91
Travel	13,200.00	9,363.85	3,836.15
Tuition paid	10,000.00	9,262.52	737.48
Other instructional expense	4,445.00	5,241.58	(796.58)
Total other instruction	$ 530,898.27	$ 456,414.45	$ 74,483.82
Total instruction	$ 2,907,916.32	$ 2,844,484.47	$ 63,431.85
Attendance:			
Salaries	$ 15,297.11	$ 15,280.81	$ 16.30
Contractual services	100.00		100.00
Supplies	800.00	336.64	463.36
Travel	800.00	744.50	55.50
Other	600.00		600.00
Total attendance	$ 17,597.11	$ 16,361.95	$ 1,235.16

ELEMENTARY SCHOOL DISTRICT NO. 96
Romeoville, Illinois

EXHIBIT IV
(cont'd)

STATEMENT OF CASH DISBURSEMENTS
For the Fiscal Year Ended June 30, 1970
(With Comparisons to Estimated Disbursements)

	Estimated Disbursements	Disbursements	Actual (Over) Under Estimated
Educational Fund (cont'd)			
Health:			
Salaries	$ 33,171.00	$ 32,105.57	$ 1,065.43
Contractual services	240.00	49.50	190.50
Supplies	1,740.00	1,327.70	412.30
Travel	900.00	679.63	220.37
Other	200.00		200.00
Total health	$ 36,251.00	$ 34,162.40	$ 2,088.60
Operation:			
Salaries	$ 232,933.80	$ 232,088.39	$ 845.41
Contractual services	17,000.00	12,835.57	4,164.43
Supplies	33,000.00	24,476.35	8,523.65
Heating	45,000.00	40,291.67	4,708.33
Utilities	65,554.57	79,567.72	(14,013.15)
Travel	2,000.00	469.72	1,530.28
Other	3,000.00	2.15	2,997.85
Total operation	$ 398,488.37	$ 389,731.57	$ 8,756.80
Maintenance:			
Contractual services	$ 18,407.16	$ 29,465.89	$(11,058.73)
Supplies	5,000.00	3,625.52	1,374.48
Other	500.00	27.10	472.90
Total maintenance	$ 23,907.16	$ 33,118.51	$(9,211.35)
Fixed charges:			
Employer's Share of Retirement Systems	$ 1,000.00	$ 487.50	$ 512.50
Insurance	44,700.00	38,627.43	6,072.57
Rental (of equipment)	2,500.00	1,185.57	1,314.43
Interest on anticipation warrants	25,000.00	40,517.90	(15,517.90)
Other interest	6,500.00		6,500.00
Total fixed charges	$ 79,700.00	$ 80,818.40	$(1,118.40)

ELEMENTARY SCHOOL DISTRICT NO. 96
Romeoville, Illinois

EXHIBIT IV
(cont'd)

STATEMENT OF CASH DISBURSEMENTS
For the Fiscal Year Ended June 30, 1970
(With Comparisons to Estimated Disbursements)

	Estimated Disbursements	Disbursements	Actual (Over) Under Estimated
Educational Fund (cont'd)			
Student and Community Services:			
Summer School:			
Salaries	$ 15,280.00	$ 10,913.32	$ 4,366.68
Contractual services	400.00	650.00	(250.00)
Materials and supplies	6,219.25	1,421.09	4,798.16
Travel	1,680.00	1,780.00	(100.00)
Other	544.00	45.00	499.00
Total summer school	$ 24,123.25	$ 14,809.41	$ 9,313.84
Athletic program:			
Salaries	$ 7,810.00	$ 6,270.00	$ 1,540.00
Contractual services	7,220.00	5,606.00	1,614.00
Total athletic program	$ 15,030.00	$ 11,876.00	$ 3,154.00
Textbooks (for rental or sale)			
Contractual services	$ 1,000.00	$ 296.71	$ 703.29
Total textbooks	$ 1,000.00	$ 296.71	$ 703.29
Lunch program:			
Salaries	$ 87,000.00	$ 73,835.29	$ 13,164.71
Contractual services	3,000.00	1,711.61	1,288.39
Food and milk	175,000.00	144,210.36	30,789.64
Supplies	7,000.00	7,941.32	(941.32)
Travel	1,000.00	123.79	876.21
Other	1,021.00	3,245.57	(2,224.57)
Total lunch program	$ 274,021.00	$ 231,067.94	$ 42,953.06
Other student and community services:			
Salaries	$ 17,400.00	$ 13,205.33	$ 4,194.67
Contractual services		766.00	(766.00)
Travel	1,400.00	1,169.65	230.35
Other expenses	1,400.00	1,742.64	(342.64)
Total other student and community services	$ 20,200.00	$ 16,883.62	$ 3,316.38
Total Student and Community Services	$ 334,374.25	$ 274,933.68	$ 59,440.57

ELEMENTARY SCHOOL DISTRICT NO. 96
Romeoville, Illinois

EXHIBIT IV
(cont'd)

STATEMENT OF CASH DISBURSEMENTS
For the Fiscal Year Ended June 30, 1970
(With Comparisons to Estimated Disbursements)

	Estimated Disbursements	Disbursements	Actual (Over) Under Estimated
Educational Fund (cont'd)			
Capital outlay:			
Additional equipment	$ 59,887.59	$ 92,639.62	$(32,752.03)
Provision for contingencies and transfers	$ 287,428.90	$ .00	$ 287,428.90
	$ 4,379,521.99	$ 3,974,219.58	$ 405,302.41
Other disbursements:			
Redemption of 1968 tax anticipation warrants		700,000.00	
Redemption of 1969 tax anticipation warrants		1,063,000.00	
Total other disbursements		$ 1,763,000.00	
Total Educational Fund Disbursements		$ 5,737,219.58	

ELEMENTARY SCHOOL DISTRICT NO. 96
Romeoville, Illinois

EXHIBIT IV
(cont'd)

STATEMENT OF CASH DISBURSEMENTS
For the Fiscal Year Ended June 30, 1970
(With Comparisons to Estimated Disbursements)

	Estimated Disbursements	Disbursements	Actual (Over) Under Estimated
Building Fund			
Operation:			
Travel	$ 400.00	$ 100.00	$ 300.00
Other operating expense	600.00	101.97	498.03
Total operation	$ 1,000.00	$ 201.97	$ 798.03
Maintenance:			
Contractual service	$ 3,600.00	$ 1,018.96	$ 2,581.04
Total maintenance	$ 3,600.00	$ 1,018.96	$ 2,581.04
Fixed charges:			
Insurance	$ 35,000.00	$ 26,255.50	$ 8,744.50
Rental	2,000.00		2,000.00
Interest on tax anticipation warrants	10,000.00	4,959.35	5,040.65
Total fixed charges	$ 47,000.00	$ 31,214.85	$ 15,785.15
Capital outlay:			
Site acquisitions and improvements	$ 36,200.00	$ 24,091.47	$ 12,108.53
New buildings and improvements	257,575.00	290,689.83	(33,114.83)
Additional equipment	100,000.00		100,000.00
Total capital outlay	$ 393,775.00	$ 314,781.30	$ 78,993.70
Provision for contingencies	$ 5,864.00	$ .00	$ 5,864.00
	$ 451,239.00	$ 347,217.08	$ 104,021.92
Redemption of 1968 tax anticipation warrants		30,000.00	
Redemption of 1969 tax anticipation warrants		190,000.00	
Total Building Fund Disbursements		$ 567,217.08	
		(Exhibit II)	

ELEMENTARY SCHOOL DISTRICT NO. 96
Romeoville, Illinois

EXHIBIT IV
(cont'd)

STATEMENT OF CASH DISBURSEMENTS
For the Fiscal Year Ended June 30, 1970
(With Comparisons to Estimated Disbursements)

	Estimated Disbursements	Disbursements	Actual (Over) Under Estimated
Building Bond and Interest Fund			
Fixed charges:			
Interest on bonds	$ 227,419.09	$ 207,848.84	$ 19,570.25
Service charge on bonds	1,000.00	545.06	454.94
Total fixed charges	$ 228,419.09	$ 208,393.90	$ 20,025.19
Bond principal retired	$ 275,000.00	$ 280,000.00	$(5,000.00)
Total Building Bond and Interest Fund Disbursements	$ 503,419.09	$ 488,393.90 (Exhibit II)	$ 15,025.19
Transportation Fund			
Operation:			
Salaries	$ 54,500.00	$ 49,298.89	$ 5,201.11
Contractual services		14,395.22	(14,395.22)
Supplies	14,500.00	13,822.79	677.21
Travel	400.00	123.40	276.60
Other	1,000.00	142.87	857.13
Total operation	$ 70,400.00	$ 77,783.17	$(7,383.17)
Maintenance:			
Salaries	$ 9,000.00	$ 7,300.33	$ 1,699.67
Contractual services	8,000.00	1,202.46	6,797.54
Supplies	2,000.00	1,973.41	26.59
Travel	200.00	65.60	134.40
Other	1,000.00	13.00	987.00
Total maintenance	$ 20,200.00	$ 10,554.80	$ 9,645.20
Fixed charges:			
Insurance	$ 7,080.00	$ 7,380.00	$(300.00)
Rental of equipment		21.00	(21.00)
Interest on tax anticipation warrants	5,000.00	3,009.35	1,990.65
Other	1,920.00	90.00	1,830.00
Total fixed charges	$ 14,000.00	$ 10,500.35	$ 3,499.65

ELEMENTARY SCHOOL DISTRICT NO. 96
Romeoville, Illinois

EXHIBIT IV
(cont'd)

STATEMENT OF CASH DISBURSEMENTS
For the Fiscal Year Ended June 30, 1970
(With Comparisons to Estimated Disbursements)

	Estimated Disbursements	Disbursements	(Over) Under Estimated
Transportation Fund (cont'd)			
Capital outlay - Additional equipment	$ 57,000.00	$ 52,540.43	$ 4,459.57
Provision for contingencies	$ 1,000.00	$ .00	$ 1,000.00
Total Transportation Fund	$ 162,600.00	$ 151,378.75	$ 11,221.25
Redemption of 1968 tax anticipation warrants		70,000.00	
Redemption of 1969 tax anticipation warrants		75,000.00	
Total Transportation Fund		$ 296,378.75 (Exhibit II)	
IMRF Fund			
District's share of IMRF and FICA	$ 45,900.00	$ 51,126.58 (Exhibit II)	$(5,226.58)
Site and Construction Fund			
Capital outlay: Brook View and Ridge View			
New building and improvements	$ 417,505.17	$ 358,241.17	$ 59,264.00
Additional equipment	39,217.90		39,217.90
Total capital outlay, Brook View and Ridge View	$ 456,723.07	$ 358,241.17	$ 98,481.90
Capital outlay: West View			
New building and improvements	$ 287.84	$ 287.84	
Total capital outlay, West View	$ 287.84	$ 287.84	$ .00
Total Site and Construction Fund Disbursements	$ 457,010.91	$ 358,529.01 (Exhibit II)	$ 98,481.90

PROJECTIONS AND CONSIDERATIONS

Well over half of the 41.5 square mile area of the Valley View District is suitable for immediate development. The area already having residential development plans underway presents a formidable pupil growth picture for the district.

Estimates of that growth, based on the most apparent development plans, show enrollment more than triple its current level by 1980. It is not expected, however, that industrial growth will keep a favorable pace with residential development. The district is organized to serve a bedroom community on a long-term basis. Tax rates and expenditures reflect this situation.

In projecting the economic and population growth of the district, this study has taken conservative positions based on findings of various local and regional studies. There is little question that these projections will be realized. There is a great deal of question, however, whether the actual 1980 community will be in any way comparable to the 1970 version. An attempt to describe all the potential socio-economic variables that might affect the area would require much speculation.

Most assurance probably can be given to the assumption that the local tax dollar will carry over half of school expenditures, that residential values will increase in proportion, and that people will keep coming. Even these could change in ten years, however.

There is activity underway that suggests new staff organization will be developed in the district during the next three to four years. The nature of that organization will likely cause shifts in professional staff assignments between teaching and supervisory categories.

The 45-15 Plan, however, has not changed the intent of the district to maintain relative pupil-staff levels which have emerged during the past five years. Ignoring the future effect of possible staff organization changes, this study has adopted the following model of pupil-staff ratios as characteristic of the district's educational operation.

> A teaching staff "unit" is 180 days per year regardless of the actual number of days an individual teacher has contracted. (Three teachers working 240 days each is the equivalent of four teachers each working 180 days.) A pupil unit is one pupil in full-time membership, kindergarten being counted as one-half unit since attendance is for one-half day.

$$18.5 \leq \frac{\text{total full-time pupils}}{\text{total professional staff}} \leq 21$$

$$24 \leq \frac{\text{full-time pupils in grades 1-6}}{\text{teaching staff in grades 1-6}} \leq 26$$

$$17 \leq \frac{\text{pupils in grades 7-8}}{} \leq 17.8$$

$$200 \leq \frac{\text{total full-time pupils}}{\text{administrative and supervisory staff}} \leq 250$$

Table 8
Application of Assumptions to 1978-79 Year

	Actual Pupil Enrollment	ADA at 95%	Weighted ADA (CEI Formula)	Full-time Enrollment
K	2,160	1,025	1,025	1,080
1-6	12,060	11,455	11,455	12,060
7-8	3,780	3,590	4,665	3,780
Total	18,000		17,145	16,920

Financial Projection

I. Category	Per-pupil Cost	Extension
Administration	$ 33.35	$ 581,785.75
Instruction	513.72	8,807,729.40
Attendance	2.93	50,234.85
Health	6.11	104,755.95
Operation	70.59	1,210,265.55
Maintenance and Repair	7.43	127,387.35
Fixed Charges	21.92	375,818.40
Total NCE	$656.05	$11,247,977.25

II. Category		
Personnel:		
Professional Administration	$ 15.50	$ 265,747.50
Teacher salaries	336.29	5,765,692.05
Other professional salaries	68.48	1,174,089.60
Other salaries (including retirement)	90.20	1,546,479.00
Total Personnel	$510.47	$ 8,752,008.15

Table 8, Application of Assumptions to 1978-79 Year (continued)

	Per-pupil Cost	Extension
Non-Personnel:		
District office expense	10.14	173,850.30
Textbooks, teaching materials, etc.	37.06	635,393.55
Other instructional expense	48.99	839,933.55
Heating and cooling	7.22	123,786.90
Other utilities	14.41	247,059.45
Fixed charges	13.15	225,456.75
All other expenses	14.61	250,488.45
Total Non-Personnel	145.58	2,495,969.10
TOTAL NET CURRENT EXPENDITURE	656.05	$11,247,977.25

Table 9
Comparison of 1969-70 with 1978-79 Expenditure Projection

Start-year assessed valuation	$117,341,413.00	$178,171,235.00
Total net current expenditures	$ 3,650,242.02	$ 11,247,977.25
Weighted ADA (CEI Formula)	5,580 pupils	17,145 pupils
NCE per pupil	$ 654.15	$ 656.05
Assessed valuation per pupil	$ 21,029.00	$ 10,392.00
NCE as % of valuation	3.1%	6.3%
State Aid and Local Support (current formula)		
Prior-year assessed valuation	$116,715,891.00	$170,091,870.00
ADA estimate (state formula)	5,272 pupils	16,190 pupils
State guarantee	$ 2,741,674.00	$ 8,418,800.00
Less qualifying amount	$ 1,050,443.01	$ 1,530,826.83
State aid amount payable	$ 1,691,230.99	$ 6,887,973.17
Amount required from local tax to meet net current expenditure	$ 1,971,703.59	$ 4,360,004.08
Local amount as % of prior-year valuation	1.68%	2.56%
Tax rate increase required over nine-year period (1970 dollars)		52%

The construction of a school building in Illinois is clearly expected to be a local matter insofar as state law is concerned. Local voters determine, through referendum, whether building bonds will be issued. Debt is encouraged by statutes which restrict the school district's ability to accumulate cash reserves.

In Illinois a constitutional provision limits the indebtedness of a school district to 5% of assessed valuation and requires repayment of debt and interest within twenty years. Service of bonded indebtedness can be made through a special tax levy, not subject to rate restrictions imposed on certain other school levies.

No formula support whatever is given by the state for construction. In extreme cases, competitive support may be available through the Illinois Building Commission. The commission was formed to assist school districts which reach their legal debt limit.

Valley View has incurred new bonded indebtedness repeatedly during the 1960's in its attempt to provide adequate classroom space for its growing pupil enrollment. Table 10 summarizes the picture.

Table 10
Valley View Bonded Debt in the 1960's

School Year	Value of Bonds Outstanding at Start of Year	Retired During Year	Issued During Year	Interest Incurred During Year	Total of Principal and Interest
61-62	$1,145,000	$ 30,000	------	$ 43,805	$ 73,805
62-63	1,115,000	50,000	1,490,000	40,831	90,831
63-64	2,555,000	50,000	------	107,299	157,299
64-65	2,505,000	50,000	------	85,501	135,501
65-66	2,455,000	100,000	1,950,000	148,095	248,095
66-67	4,305,000	105,000	------	144,630	249,630
67-68	4,200,000	170,000	850,000	138,545	308,545
68-69	4,880,000	250,000	675,000	196,232	446,232
69-70	5,305,000	280,000	------	208,393	488,393
70-71	5,025,000				

The issue of $675,000 bonds in 1968-69 temporarily exhausted the power of the district to incur debt at a time when enrollment growth was increasing at a more rapid pace than ever before.

With assessed valuation growing at, say, $5 million per year, the district would be empowered to incur new debt in an annual amount of $250,000 on the sole basis of increased property value. That amount, plus a like amount gained through retirement of old debt was just not enough to construct needed classrooms during the 1970's.

One possible solution, a more rapid debt retirement rate, was considered to have too detrimental an effect on current taxes. Debt retirement and interest payments have clearly become major budget items in Valley View already.

The State of Illinois had taken steps in 1957 toward assuring that school buildings would be available in districts without sufficient assessed valuation to carry necessary debt. The commission considers applications from districts which can demonstrate that expected enrollments will increase beyond their capacity to provide space.

The commission does not have, as yet, the authority to issue bonds itself but relies on the state legislature for appropriations from current state revenue. These appropriations have not been sufficient to cover all eligible applications although there is evidence that future legislative sessions will make more adequate appropriations.

When an application can be accepted, the commission constructs the needed schools on the basis of projected average daily attendance. The district in question, through voter approval of a referendum, levies a tax used to lease the schools from the state. At least 6% of the project cost must be paid in rental each year until the total project cost has been paid. At this time, title to the school buildings reverts from the state to the school district. No interest is charged on the project funds.

In 1970 the Illinois School Building Commission approved an application from Valley View for a construction program which is now underway. Although the project will provide some sixty-five new classroom spaces, at completion of construction enrollment growth will have more than filled the new buildings.

Table 11
Summary of Valley View Construction

			Number of Pupils		
Existing Schools	1970-71 Grades	Number of Classrooms	Minimum Operating Level	Stated Design Capacity	Maximum Emergency Level
Park View	K-6	42	1,092	1,200	1,540
Valley View	K-6	31	806	900	1,150
Ridge View	K-4	16	416	480	575
North View	K-5	30	780	1,000	1,080
Brook View	K-4	16	416	480	575
West View	7-8	(38)	1,000	1,200	1,450
			Current Total	5,260	6,370

Table 11, Summary of Valley View Construction (continued)

Construction Underway	Number of Classrooms	Minimum Operating Level	Stated Design Capacity	Maximum Emergency Level
Oak View	(35)	900	1,100	1,300
Ridge View addition	(15)	390	420	525
Brook View addition	(15)	390	420	525
	New Space Total		1,940	2,350

In 1972, with the completion of current building projects, Valley View's instructional facilities will be organized as follows:

	Design	Emergency
Kindergarten*	730	800
Elementary (1-6)	5,270	6,470
Junior High (7-8)	1,200	1,450
Total	7,200	8,720

*Kindergarten pupils attend half-day sessions. These pupil figures are full-time equivalents; i.e., half of the total kindergarten pupils actually served.

The most obvious effect of the 45-15 calendar is on the ability of the Valley View District to provide instructional space for its growing pupil population. In order to translate pupil growth into building needs, this study will adopt building models based on recent and current policies of the district.

Current district policy is to provide "neighborhood" schools for pupils in kindergarten through grade six. Seventh and eighth grade pupils attend a central junior high which is organized on a departmental basis. District administrators expect this policy to continue except that a second junior high would be built in a new location to minimize transportation costs.

When the pupil load makes it impossible to adhere to a neighborhood assignment policy, the district reassigns fifth and sixth grade pupils to balance class sizes. The district apparently considers district-wide class size balancing more important than preserving neighborhood locations. When necessary, pupils are transported in order to achieve class size balance.

Although the superintendent admits a preference for smaller buildings, the district has chosen to construct schools with capacities of 1,000 and more pupils. Current construction plans continue this practice.

The building models' cost estimates are stated in terms of 1970-71 dollars, as are other cost projections in this study.

Construction of a new school is currently underway in Valley View to house pupils in kindergarten through grade six. The project is being supervised by the Illinois School Building Commission which will lease the facility to the district under a 16-2/3 year no-interest payout plan.

This special arrangement is provided school districts unable to meet critical classroom needs because of a constitutional provision limiting bonded indebtedness to 5% of assessed valuation. The commission's work with school building projects makes it a most reliable source of information on building costs.

The commission calculates costs for the new school as follows:

Projected average daily attendance	1,125
Classrooms needed at 32 students per room	35
Cost of building at $31,800 per classroom	$1,113,000
Square foot cost limit	$18.55
Minimum total area allowable	60,000 sq. ft.
Sitework - nominal	$33,390
Moveable equipment at $1,000 per classroom	$35,000

Thus the total project cost is $1,181,390. The commission's statutory formula assumes housing a pupil enrollment of 1,200. District policy suggests this design capacity is overstated by some 100 to 150 pupils. This study will use 1,100 pupils as the design capacity and 1,300 pupils as maximum under emergency conditions.

In 1966 Valley View occupied its first junior high school building. The building is of advanced design consisting of four circular pods surrounding a central cafetorium-library area. One pod houses the gymnasium and one the theater-music area. The other two pods each contain classrooms surrounding a resource center.

Thirty-eight room-units are organized to include areas for:

Design Purpose	Number of Room-units
Business education	2
Science	3
Language laboratories	2
Home economics	2
Industrial arts	3
Graphics	1
Arts and crafts	3
Vocal music	1
Instrumental music	2
General use	19
	38

Total floor space of the building is 114, 312 square feet. Total project cost was $1, 555, 612 including fixed equipment except lockers and home economics. Sitework and paving were also included.

The stated design capacity of the junior high school is 1, 200 pupils. A good deal of flexibility is included. Although the building has housed as many as 1, 460 pupils, the junior high principal considers 1, 000 pupils the ideal load and 1, 100 pupils as maximum for the programs he operates.

The Illinois School Building Commission calculates a construction cost escalation factor of 32. 5% in this area since January, 1967. Application of this factor to the junior high school project updates the building cost to $2, 061, 200 exclusive of movable equipment.

Before the completion of the current building program, Valley View will begin plans for still additional space. These future plans will differ markedly from those required by the traditional school year calendar.

If the district were legally capable of assuming the resulting debt, Table 12 compares the building program under the traditional year to that required by the 45-15 Plan.

Table 12
Alternative Building Programs, 1972-1979

Year	Traditional Year	45-15 Plan
1972	Junior high on emergency schedule	
1973	Occupy second junior high school; occupy seventh elementary school	Occupy second junior high school
1974		Operate sixth grade program in junior high
1975	Occupy eighth elementary school; occupy ninth elementary school	
1976	Occupy third junior high school; operate sixth grade in junior high building	Occupy seventh elementary school
1977		Occupy eighth elementary school
1978	Occupy tenth elementary school; occupy eleventh elementary school	Occupy third junior high school for grades 6, 7, 8
1979	Occupy twelfth elementary school	Occupy ninth elementary school

Table 13 compares the debt assumption and debt service requirements of these two building programs. For simplicity, the comparison assumes a 5-1/2% interest rate and equal annual payments. The district's bonded indebtedness as of July 1, 1970, stands at $5,025,000. Future service of this debt is not included, nor is the debt to be incurred as a result of the present building program.

Table 13
Schedule of Debt Issues and Service Requirements

Traditional School Year

School Year	Debt Outstanding at Start of Year	Retired During Year	Issued During Year	Interest Incurred During Year	Total of Principal and Interest Paid
1972			$3,180,000	$174	
1973	$3,180,000	$ 91,200		$174,900	$266,100
1974	3,088,799	96,216	2,360,000	169,833	266,100
1975	5,352,583	169,191	2,000,000	294,392	463,583
1976	7,183,392	235,855		395,086	630,942
1977	6,947,536	248,827	2,360,000	382,114	630,942
1978	9,058,708	330,196	1,180,000	498,228	828,425
1979	9,905,512	382,198		544,968	927,166
1980	9,526,313				

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1972			2,000,000		
1973	2,000,000	57,358		110,000	167,358
1974	1,942,641	60,513		106,845	167,358
1975	1,882,127	63,841	1,180,000	103,517	167,358
1976	2,998,286	101,194	1,180,000	164,905	266,100
1977	4,077,091	140,601	2,000,000	224,240	364,841
1978	5,936,490	205,693	1,180,000	326,506	532,200
1979	6,910,796	250,848		380,093	630,942
1980	6,659,948				

Table 14
Project Savings Under 45-15 Plan

School Year	Schedule of Annual Interest Savings	Schedule of Debt Retirement Savings
1973	$ 64,900	$ 33,841
1974	63,038	35,702
1975	190,875	105,349
1976	230,180	134,661
1977	157,874	108,225
1978	171,722	124,502
1979	164,874	131,350
	$1,043,465	$673,634

Table 15
Recap of Alternative 1972-1979 Building Programs

	Traditional Year	45-15 Plan	Difference
New junior high schools	2	2	
New elementary schools	6	3	
Total cost of building	$11,080,000	$7,540,000	$3,540,000
Interest paid on new building bonds during period	2,459,574	1,416,108	1,043,465
Principal retired during period	1,553,686	880,051	673,634
Debt outstanding at end of period	9,526,313	6,659,948	2,866,365

DEVELOPMENT AND "START-UP" COSTS

Converting a school district calendar from the traditional year to an all-year operation obviously requires a great deal of planning and development activity. Valley View, as the first district in the state to attempt such a task, carried a greater burden of time and cost then would be expected in other districts. The major portion of the planning effort, however, was borne by the regular administrative staff to the exclusion of other planning projects which might have normally occupied their time and energies.

There is no way to quantify the amount of administrative cost which should be charged to 45-15 planning. One assistant superintendent spent the major portion of his time supervising the development project. An instructional supervisor, designated as director of research, spent virtually full time in various development activities. Another supervisory-level staff member worked with teachers and teacher-contract details for the better part of eight months.

The development task must, however, be viewed as a total team effort which occupied the primary attention of the superintendent and his staff for some two years. Virtually every administrative decision made during that period was weighed against the coming of the 45-15 Plan. Virtually all planning sessions and "bull sessions" on and off the job had the 45-15 Plan as a topic.

Whether this concentration interfered with or enhanced the normal administrative activities in the district is debatable. Evidence seems to favor the latter position.

Identifiable costs that can be directly attributed to the 45-15 Plan development are these:

1. Air conditioning - All of the district schools were air conditioned when constructed except for the original (1954) 31-room Valley View School and a 24-room section of Park View School. The district had sufficient funds to air condition both schools but decided instead to completely replace the heating system at Valley View with an all-year system of heating and cooling. The cost of that system was $200,000.

   The 24-room section of Park View will be air conditioned before the summer of 1971 at a cost of approximately $80,000.

   Air conditioning is also being provided in several auxiliary areas of the other schools at a cost of about $47,000.

2. Professional Staff Committee - When the district had developed a definitive course of action, a work group was formed from the professional staff. Members of this group were paid $5.00 per hour and served over a period of seven months. The total outlay for this effort was $3,000.

3. Consultant Expenses - The district was greatly concerned about the variety of administrative details that would require attention in the development and implementation of the 45-15 Plan. An outside consultant was commissioned to supervise the scheduling tasks and perform other administrative duties during 1969 and 1970. The total cost of the consultant contract was $17,900 over the two-year period.

4. Funded Activities - Several projects relating to the development of the 45-15 Plan were initiated as a result of outside funding. These included:

   a. A feasibility study supported by the U. S. Office of Education through the small grant program administered by the regional office of HEW. The grant was $10,000.

   b. Several small receipts from the State of Illinois to assist in the preparation of information materials. These totaled approximately $1,500.

   c. The research grant from the U. S. Office of Education which supported the design of further research and evaluation to be conducted in the district and the preparation of this report. That grant amounted to $43,800.

d. A demonstration project conducted under Title III ESEA to handle visitors to the district. Support of this project through June, 1971, amounts to $38,000.

e. Further evaluation activities, beginning November 1, 1970, conducted under support from the Office of the Superintendent of Public Instruction in the amount of $16,000 through June 30, 1971.

In all cases of funded projects, of course, additional time is required by the district staff in supervision and participation.

In addition to the development costs mentioned above, there were other costs less easily quantified which were one-time or start-up expenditures.

Teacher Salary Cash Flow

Many districts, Valley View included, follow the practice of issuing teacher paychecks over twelve months rather than just during the regular school year. The total annual salary is, of course, the same, but the teacher is receiving salary on a regular basis and the district has use of a portion of the salary money into the summer.

Since the 45-15 Plan began its operation in June rather than September of the 1970-71 school year, the new year payroll for some teachers began in July, 1970. This represented no actual increase in salary outlays but the accelerated cash flow should be viewed as costing the district something in interest on short-term debt (tax anticipation warrants). The actual case, however, was that the State of Illinois agreed to advance state aid payments to help finance this cash flow lag.

First Summer Staff Assignments

The plan chosen by the district to phase in the four pupil groups caused some inefficiencies in staff assignments during the first thirty days of school. From June 30 to July 20 only one-fourth of the pupils (one-third of the new service level) were in school. A corresponding number of classroom teachers returned to work with these pupils but, in certain cases, teaching specialists and supervisory staff were "under-utilized" in terms of the pupil-teacher ratio. Of course, the buildings were open and operating as if all pupils were present. Between July 21 and August 10, the pupil load was at two-thirds of the new operating level and on August 11 the third group of pupils arrived to bring the pupil load to capacity.

Although costs can be attributed to the under-utilization of staff in this first summer, the district believes that adjustment period was valuable, not only to the smooth operation of the 45-15

Plan, but to the educational program in general. Principals reported that they had an opportunity to work with their teachers more effectively than ever is possible under a traditional September school opening. Preparation for the new school year was considered unusually satisfactory.

Opening an Enlarged School System

If a school district enlarges its physical capacity by any means, there will always be an immediate per-pupil cost increase. The 45-15 Plan, in effect, provided the district with two new 30-room school buildings. This new space was provided because it was badly needed, and the district chose to staff and utilize the new space as soon as it became available.

Obviously, when the 1969-70 school year closed on June 8 without that space in use, per-pupil costs were less than the 1970-71 year cost level which reflects the additional space utilization. In this respect, the 45-15 Plan is not different from, say, opening the equivalent new buildings. The school district determines to what extent the new facilities will be immediately utilized.

Had the extra space actually been provided by two new buildings, of course, certain costs would have been far greater. Two new principals, two office staffs, and two custodial crews would have been hired. The new buildings would have required core facilities to serve the classrooms.

It is important to financial analysis of the 45-15 Plan to compare this method of enlarging the school system capacity against other methods of accomplishing the same end effect rather than to compare the 45-15 system against the smaller-capacity system it replaces.

On the other hand, it must be noted that these differences are of a short-term nature. The two new principals that were "not hired" at the outset of the 45-15 Plan's operation may appear in the district's administrative organization as instructional supervisors or district office professional staff within a short period of time. It can be expected that the resulting staff organization will be more effective and valuable.

In summary, what initial costs must be borne to develop and implement the 45-15 Plan? These fall into three categories:

1. The cost of people to be devoted to the planning effort. This will include administrators, faculty groups, and outside consultants. In Valley View this total cost was probably some fifty to sixty thousand dollars over a two-year period or about ten dollars per pupil. Other districts, certainly within Illinois, can now expect an easier and less expensive job.

2. During the implementation period, costs of preparation and phasing-in. These ranged, under the Valley View approach, from extra custodial time during June to extra teacher costs before pupil loads reached capacity. These costs can be viewed in several ways but did not exceed $50,000. (Actually under Valley View's implementation method, one-fourth of the pupils receive fifteen days less instruction and one-fourth receive thirty days less instruction during the first fiscal year than under the traditional calendar. This defers some $150,000 in staff costs indefinitely.)

3. Capital outlay for modifications to existing facilities--chiefly air conditioning. The building that required air conditioning in the district was difficult to modify. Surveys of costs for air conditioning existing facilities offer varied estimates. From these surveys and Valley View's experience, it would seem that $3,500 per classroom would be a maximum figure. Less satisfactory installations (window units, for example) could bring that figure to below $1,000.

   Valley View did not choose to make other modifications to their existing classroom facilities. If consideration is given to building modifications, it then will be to enhance certain program changes that grew out of all-year operation not as a direct result of the 45-15 Plan.

What, beside initial costs or changes in the instructional program, are new costs due to 45-15 operation? Pupil transportation is a unique example. Even through careful scheduling, the cost per transported pupil will increase depending on route efficiences. Further, if new buildings had been built, presumably the pupil transportation load would have been reduced because of the new schools' locations. So, in this case, having fewer schools costs more than having more schools.

Other costs, such as building operation, maintenance, cafeteria, etc., when compared to their level had new buildings been constructed, are certainly not higher and apparently are somewhat lower than the traditional year allows. In any case, these cost differences are insignificant in the Valley View District and completely subject to the discretion exercised by operating supervisors.

The one possible exception worth further study is the cost of operating air conditioning. The first summer of 45-15 operation did not produce any measurable standards. It is expected that the increased cost of utilities in Valley View during the current year will be between $45,000 and $50,000 although twice that was budgeted. This cost is higher than the cost that would be incurred to heat and light the equivalent additional space during the winter. During the second summer's operation, the district will attempt to monitor these costs and develop standards for continued operation.